KEATING OF CHICAGO, INC.®

"Serving Those Who Serve The Very Best"

INSTANT RECOVERY® ELECTRIC FRYER SERVICE MANUAL

Intertek 9902091 Intertek 9902091 NSF®

KEEP THIS MANUAL FOR TRAINING NEW PERSONNEL

1-800-KEATING
www.keatingofchicago.com

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Notice: This operating, installation, and service manual should be given to the user. The operator of the fryer should be familiar with the functions and operation of the fryer. This manual must be kept in a prominent, easily reachable location near the fryer.

Notice: Keating of Chicago, Inc. (manufacturer) reserves the right to change specifications at any time.

FOR YOUR SAFETY: DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

WARNING: IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

I INTRODUCTION

GENERAL

Keating Instant Recovery® Electric Fryers are designed to give maximum production efficiency, delivering high quality food products. The following design features are incorporated in Keating Instant Recovery® Electric Fryers.

STANDARD FEATURES

- Highly polished stainless steel fryer vessel
- Highly polished stainless steel front
- Highly polished stainless steel elements
- Highly polished stainless steel thermostat bulb
- Highly polished stainless steel Hi-Limit sensor
- True Cold Zone for proper sedimentation
- Grid screen over elements
- Melt cycle
- 1” full port front drain valve on 10x11 and 14; 1-1/4” for 18 and larger
- High temperature limit control with manual reset
- Patented accurate temperature control system ±2°F
- Ideal 35” working height
- One pair of split baskets or one full-size basket
- Circuit breaker protection for 208-240V 14 to 34x24 Models.

STANDARD ACCESSORIES

- Keating Klenzer Sample
- Keating Sea Powder Sample
- Drain clean out rod

STANDARD FRYERS

- Sizes: 10x11 to 34x24
- Oil capacity 30 to 210 pounds
- NSF, UL and CUL listed.

MODEL VARIATIONS

BB Model: BB Model Fryers feature Power On and Element On indicating lights, a melt cycle and an electric stainless steel thermostat. The 14BB model can cook up to 72 lbs. of frozen fries or 75 lbs. of chicken per hour.

TS Model: TS Model Fryers have the highest input of all Keating fryers. The TS Model features a melt cycle, and electric stainless steel thermostat, two electronic timers and four indicating lights which display the status of the fryer’s operation. The 14TS Model can cook up to 90 lbs. of frozen fries or 75 lbs. of chicken per hour.

TS Basket-Lift Model: TS Basket-Lift Model Fryers come with all the same features as the TS Model. The Basket-Lift mechanism lowers the baskets of food into the oil when the timer button is pressed and raises the baskets when the cooking cycle is complete. Split baskets are used for all models. (Triple baskets available with some models.)

CM Model: BB and TS Counter Model Fryers are equipped with all of the same features as the BB and TS Models respectively, but take up less than three square feet of counter space. The 10x11CM Model can cook up to 36 lbs. of frozen fries per hour and the 14CM Model can cook up to 72 lbs. per hour.

CPU Model: CPU Model Fryers have the same input as the TS Models. The panel of switches and indicating lights are also the same. A programmable computer replaces the two timers and thermostat. A secondary thermostat, located in the fryer’s cabinet, permits frying without the computer.

SAFETY PRECAUTIONS

WARNING

THIS SYMBOL WARNS YOU THAT SERIOUS BURNS OR OTHER INJURIES MAY RESULT IF SAFETY INSTRUCTIONS ARE NOT FOLLOWED.

- This service manual should be retained in a safe place for future reference. The installation of your new fryer must conform to current codes, with the current National Electrical Code ANSI/NFPA 70 or Canadian Electrical Code CAN 22.2 as applicable.
- Your ventilation hood, when installed, must conform to the current ANSI/NFPA 96 standard.
- You must maintain this appliance free and clear from combustibles.
- Adequate clearance for servicing and proper operation must be maintained. Your fryer is designed to be serviced from the front.
- Keating commercial fryers are intended for other than household use.
- ALWAYS instruct new employees on proper fryer operation.
- A fryer should be operated ONLY by properly trained personnel.
- ALWAYS turn fryer off each night.
- ALWAYS turn fryer off at customer power panel before servicing.
- NEVER leave a fryer unattended during operation.

- NEVER move a fryer when full of hot oil.
- NEVER introduce objects or liquids into fryer, while operational, which are not designed or made for cooking.
- THIS FRYER MAY NOT BE ALTERED, MODIFIED OR CHANGED IN ANY WAY.

WARNING

IMPROPER INSTALLATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THESE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

II INSTALLATION

This fryer MUST be installed, inspected, calibrated and serviced by qualified and/or certified and/or licensed service personnel - you may void your Keating warranty if installation is not completed per local, national and Keating specifications. Contact your dealer for assistance.

DAMAGE DURING SHIPMENT

The fryer has been assembled, tested and inspected at the factory. Upon arrival, the complete fryer should be checked for any damage that may have occurred during shipment.

The carrier is responsible for all damage in transit whether visible or concealed. Do not pay for the freight bill until the fryer has been thoroughly checked for damage. If concealed damage is found later, contact the carrier immediately to file a claim.

What to do if equipment arrives damaged:

VISIBLE LOSS OR DAMAGE – Be certain to note this on the freight or express receipt and have it signed by the delivery person.

FILE CLAIM FOR DAMAGES IMMEDIATELY – Regardless of extent of damage.

CONCEALED LOSS OR DAMAGE – If damage is noticed when equipment is unpacked, notify the freight company immediately, and file a “concealed damage claim”. This MUST be done immediately. Be sure to retain the shipping container for inspection.

Keating does not assume responsibility for Loss OR Damage incurred in transit.

INSTALLATION

Installation must conform with local codes or, in absence of local codes, with the current National Electrical Code ANSI/NFPA 70 or Canadian Electrical Code CAN 22.2 as applicable.

NOTE: For safety purposes, all Hi-Limit controls are manually reset. Always check the Hi-Limit reset button before attempting to use the fryer. It is possible that the Hi-Limit button may have been accidentally activated on a new fryer while in transit.

POSITIONING

The fryer must be placed under an exhaust hood with a fire retardant system. Your ventilation hood, when installed, must conform to the current ANSI/NFPA 96 standard. **ALL** connections and placement must comply with current local and national codes. It is the responsibility of the owner and local installer to comply with these regulations when installing the fryer.

Counter model and floor model fryers **must be restrained to prevent tipping** when installed in order to avoid splashing, spilling, etc. of hot liquid. The restraining method may be a manner of installation or by separate means.

LEVELING

The fryer will operate at its highest efficiency when properly leveled. Place a level on fryer vessel from side to side. For fryers on legs, the bottom foot of the leg is adjustable. Looking from the bottom of the foot, turn counter clockwise to decrease height or clockwise to increase height until level. For fryers on casters, the casters are adjustable by loosening the jam nut and turning the caster in or out. When the desired level is reached, tighten the jam nut. Adjustments of more than 19mm are not recommended on any caster. The same procedure should be followed to level the fryer from front to back.

Figure 2-1

Figure 2-2

RESTRAINING DEVICES

On fryer installations with casters, casters and jam nuts must be completely tightened. Adequate means must also be provided to limit the movement of the appliance.

ELECTRICAL CONNECTION

The Keating Instant Recovery® Electric fryer is equipped with a three wire terminal block for customer connections. The terminal block is located behind the fryer door on the right side behind a panel (held in place by two screws). Compare the fryer terminal connections to the appropriate wiring diagram for the fryer (see pages 31 thru 36) to see if the fryer is connected three phase or single phase. All wires/cords, plugs, receptacles and circuit breakers must be sized adequately for the full load rating of the fryer as specified by local codes, or in the absence of local codes, by the current National Electrical Code ANSI/NFPA 70 or Canadian Electrical Code CAN 22.2 as applicable.

The Keating Electric Fryer is also equipped with a grounding lug next to the terminal block. For proper grounding procedures, see local codes or, in the absence of local codes, by the current National Electrical Code ANSI/NFPA 70 or Canadian Electrical Code CAN 22.2 as applicable.

NOTE: The connections to the fryer can be changed in the field from three phase to single phase or from single phase to three phase. This can be done by simply changing the wiring at the terminal block. To change the connections for your fryer, see the appropriate wiring diagram for your fryer on pages 31 thru 36.

NOTE: For fryers rated at 208-240 volts, the amperage ratings marked on the nameplates of the fryers are listed at 240 volts as required by UL. If your fryer is to be fed by a 208 or 220 volt system, consult the Keating Fryer Specifications on pages 37 and 38 to determine the full load rating of the fryer.

NOTE: Some fryers with Basket-Lifts, Zero-Space™ Filters (model BB ZS or TS ZS) or Central Filters may have separate 120 volt control circuit connections. Fryers with Basket-Lifts or Zero-Space™ filters will need the connections made to a separate smaller terminal block located near the larger terminal block for the 208-240 volt connections or inside a separate wiring box. This terminal block will have one black and one white wire connected to it. Fryers with Central Filters will need the connections made inside the Central Filter junction box. For proper connections, refer to the appropriate wiring diagram on pages 31 thru 36.

NOTE: A copy of the wiring diagram is included with this manual.

NOTE: A hole has been punched in the rear of the fryer cabinet for a cord or conduit exit. If a cord is used, the National Electrical Code, UL standards and most local codes require a bushing or strain relief (not provided by Keating) to protect the cord.

CALIBRATION

For Calibration refer to page 9 - Calibration.

III OPERATING

FILLING

NOTE: Before filling the fryer make certain the fryer vessel is sanitized, dry and the drain valve is completely closed. Refer to figures 3-4, 3-5 on pages 6 and 7 for location of drain valve.

⚠ WARNING

BE SURE THE HEATING ELEMENTS ARE COMPLETELY COVERED WITH OIL BEFORE SWITCHING THE FRYER ON. IF OIL LEVEL DROPS BELOW TOP OF HEATING ELEMENTS, SEVERE DAMAGE TO FRYER AND INJURY TO OPERATOR MAY RESULT.

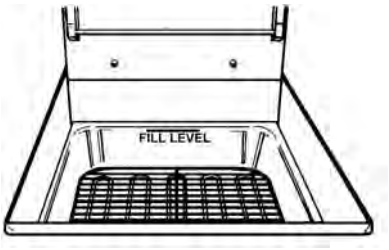
⚠ WARNING

WATER IN ANY FORM AND HOT OIL DON'T MIX!!!

CAUTION: Oil expands when heated. The "Fill Level" line has been provided to ensure optimum cooking while ensuring the safety of the operator. Do not overfill the fryer vessel.

Figure 3-1

Fill Level Line



BB & TS, CPU and Basket-Lift Models

1. Fill the fryer vessel with oil up to the “Fill Level” line. (Refer to pages 37 and 38 for the oil capacity of your particular model).
2. If using solid shortening is used, remove screen and firmly pack solid shortening between the heating elements. Proceed to - Melting section below, for instructions on use of the melt cycle.

MELTING

The Keating Melt Cycle safely melts solid shortening in the fryer vessel without scorching.

WARNING

BEFORE ATTEMPTING TO LIGHT THE FRYER, MAKE SURE THE ELECTRIC CONNECTIONS ARE SECURE AND HAVE BEEN LEAK TESTED AND THE FRYER HAS BEEN PROPERLY FILLED WITH OIL.

A. BB, TS and Basket-Lift Models

1. Set the thermostat to the desired temperature.
2. If using solid shortening, set On/Off/Melt switch to the “MELT” position. Stay in the “MELT” cycle until the shortening has melted completely and is at the “Fill Level” line before switching to the “ON” position for cooking.

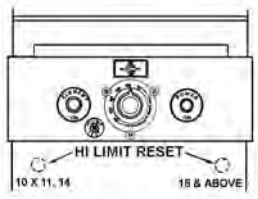
B. CPU Models

*See separate computer instructions or call 1-800-KEATING.

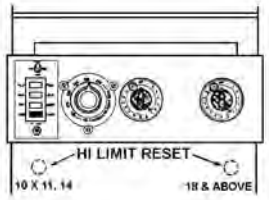
NOTE: During the “MELT” cycle, the elements are on for approximately 5-7 seconds and off for approximately 35 seconds.

Figure 3-2

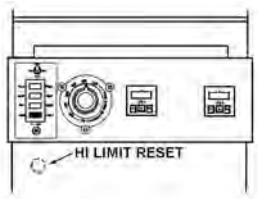
BB, TS and TS Basket-Lift Control Panels



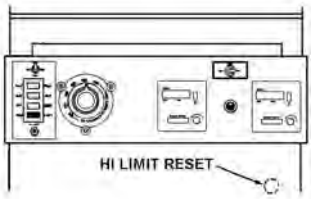
BB MODEL



TS MODEL



10x11, 14 TS BASKET LIFT MODEL



18 & above TS BASKET-LIFT MODEL

COOKING

Keating Instant Recovery® Electric Fryers are designed to provide maximum production efficiency and deliver high quality food products. Low-temperature cooking, highly polished stainless steel and a true COLD ZONE mean extended oil life. Follow cooking procedures below for your model.

WARNING

- **OPERATION OF THIS FRYER SHOULD BE LIMITED TO PERSONNEL WHO HAVE BEEN THOROUGHLY TRAINED IN OPERATING PROCEDURES.**
- **USE ONLY KEATING APPROVED BASKETS IN YOUR FRYER. NEVER OVERFILL FRY BASKETS. DO NOT BANG BASKETS ON BASKET HANGERS OR FRYER VESSEL.**
- **CARE SHOULD BE TAKEN WHEN LOWERING BASKETS INTO FRYER TO PREVENT SPLASHING HOT OIL FROM FRYER VESSEL.**
- **NEVER LIFT BASKETS DIRECTLY OUT OF THE FRYER VESSEL WITHOUT DRAINING AS SEVERE INJURY MAY RESULT.**

NOTE: For safety purposes, all Hi-Limit controls are manually reset. Always check the Hi-Limit reset button before attempting to use the fryer. If the Hi-Limit has tripped, the fryer will not operate.

NOTE: For a fryer with a Central or Zero-Space™ Filter, always check the rear drain operating handle before attempting to use the fryer. A safety switch prevents the fryer from operating if the handle is not pushed in completely.

A. BB Models

1. Fill fryer as described on page 3 and 4 - Filling.
2. Set On/Off switch to the “ON” position. “ELEMENT ON” light will be illuminated.
3. Set thermostat to the desired frying temperature (between 325°C and 335°C).
4. When the oil reaches the desired frying temperature and the “ELEMENT ON” light goes off, lower filled basket(s) slowly into the hot oil.
5. When cooking cycle is complete, carefully lift basket(s) out of oil. Place them on basket hanger rods (on splashback of fryer) to allow draining of excess oil.

B. TS Model

1. Fill fryer as described on page 3 and 4 - Filling.
2. Set On/Off switch to the “ON” position. “HEAT” light will be illuminated.
3. Set thermostat to the desired frying temperature (between 325°C and 335°C).
4. When the oil reaches the desired frying temperature, the “HEAT” light will go off, and the “COOK” light will illuminate.
5. Lower filled basket(s) slowly into the hot oil.
6. Set timer for left or right side basket, whichever is being lowered into oil.
7. When timer sounds, lift basket out of oil. Place on basket hanger rods (on splashback of fryer) to allow draining of excess oil.

C. Basket-Lift Models

1. Fill fryer as described on pages 3 and 4 - Filling.
2. Set On/Off switch to the “ON” position. “HEAT” light will be illuminated.
3. Set thermostat to the desired frying temperature (between 325°C and 335°C).
4. When the oil reaches the desired frying temperature, the “HEAT” light will go off, and the “COOK” light will illuminate.
5. Fill basket(s) to proper level and place on upper bar of lift rod(s).
6. Set timer(s) to desired cooking time. For programming timers see page 7
7. Push “START-STOP” button on timer(s). Basket(s) will automatically lower into fryer vessel.
8. When cooking cycle is complete, an audible alarm will sound and the basket(s) will raise automatically. Allow oil to drain before removing baskets.

D. CPU Model

*See separate computer instructions or call 1-800-KEATING

SHUTDOWN

A. BB, TS and Basket-Lift Models

1. Turn fryer On/Off/Melt switch to “OFF” position.

B. CPU Model

1. Set Main Power On/Off switch to the “OFF” position.

DRAINING

WARNING

ALWAYS SHUT THE FRYER OFF COMPLETELY BEFORE DRAINING. THE FRYER SHOULD BE DRAINED ONLY UNDER THE SUPERVISION OF PROPERLY TRAINED PERSONNEL. A DRAIN PIPE AND COVERED CONTAINER SUITABLE FOR USE WITH HOT OIL SHOULD BE USED TO ENSURE THE SAFETY OF THE OPERATOR.

1. Operator should be outfitted with proper attire including:
   - – Oil and heat resistant gloves
   - – Oil and heat resistant apron
   - – Safety goggles
   - – Oil and heat resistant footwear

Figure 3-3

Operator in safety gear

2. Turn off the fryer and open the door.
3. For front drain fryers, put approved container under drain valve. For fryers with a central filter, slide filter drawer in completely.
4. For front drain fryers, slowly turn handle forward to avoid splashing. The drain valve will be completely open after 1/4 turn.
5. For units with rear drain valves, slowly pull drain valve operating handle straight out (unhook from metal latch first).

Figure 3-4

Front drain valve

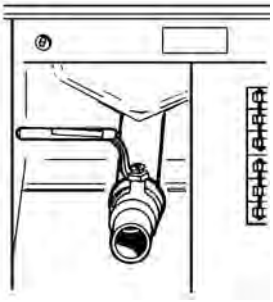
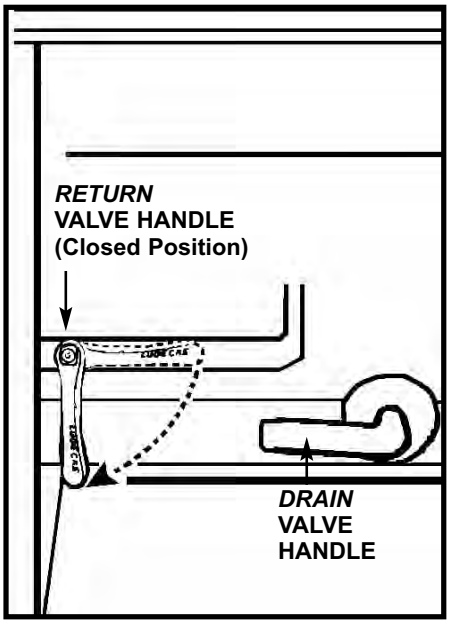


Figure 3-5

Rear drain valve



WARNING

UNDER NO CIRCUMSTANCES SHOULD YOU PERMIT HOT OIL TO COME IN CONTACT WITH WATER OR ICE. ALL DRAINING SHOULD BE DONE UNDER THE SUPERVISION OF PROPERLY TRAINED PERSONNEL. A DRAIN PIPE AND COVERED CONTAINER SUITABLE FOR USE WITH HOT OIL SHOULD BE USED WHENEVER A FRYER IS DRAINED. ALWAYS DRAIN OIL INTO A COVERED RECEPTACLE.

CLEANING AND BOIL-OUT

When cleaning and boiling out your fryer use Keating Sea Powder and Keating Klenzer to keep your fryer in top condition. Keating Sea Powder dissolves any grease build up—even carbonized grease in fryer vessels—one of the leading causes of premature oil breakdown. And once your fryer vessel is clean, use Keating Klenzer, the finest dry stainless steel polish available, to restore your Keating Instant Recovery® Electric fryers' exterior to its original luster. Both Keating Klenzer and Sea Powder are USDA approved.

CAUTION: Disconnect electric power source before doing any cleaning.

CAUTION: To avoid damaging the fryer, do not power wash, spray or hose it down while cleaning.

Figure 3-6

Keating Klenzer and Sea Powder

1. Put on safety attire. See page 5 - Draining.
2. Turn the fryer off.
3. Drain oil from fryer, see page 5. Filtering may be done at this step.
4. Remove oil container to a secure area to prevent accidental spillage.
5. Fill fryer vessel to "Fill Level" line with water.

WARNING

UNDER NO CIRCUMSTANCES SHOULD THE FRYER BE LEFT UNATTENDED DURING BOIL-OUT. TRAINED PERSONNEL MUST BE PRESENT DURING THE PROCEDURE TO PREVENT BOIL OVER OR TO TURN OFF THE POWER IF WATER DROPS BELOW HEAT TRANSFER TUBES.

6. Set thermostat and turn fryer on to bring water to a gentle boil.
7. Once boil has been reached, turn fryer off.
8. Dissolve 2/3 cup of Keating Sea Powder for every five gallons of water and let soak for 1/2 hour. If there is a large build-up of carbonized grease, allow fryer to soak overnight.

CAUTION: Do not damage or remove thermostat bulb as this may affect the accuracy of the fryer.

9. While soaking, a natural fiber brush may be used to scrub the tubes and inside walls of fryer.
10. Drain the water and Sea Powder into a dry suitable receptacle and remove from cooking area.
11. Spread Keating Klenzer liberally on sides of fryer vessel.
12. At this point, a non-abrasive scouring pad may be used to remove the now softened carbonized grease.
13. Thoroughly rinse fryer vessel with potable water to remove all Klenzer.

14. Prior to refilling with oil, wipe the inside of the fryer vessel making sure all water and Klenzer has been removed.

WARNING

WATER IN ANY FORM AND HOT OIL DON'T MIX!!!

15. Close drain valve.

WARNING

FAILURE TO CLOSE DRAIN VALVE BEFORE REFILLING THE FRYER MAY RESULT IN SERIOUS INJURY.

WARNING

WHEN YOUR FRYER IS BEING USED IN CONJUNCTION WITH A CENTRAL FILTER, DISCONNECT POWER SUPPLY BEFORE RESETTING MOTOR TO PREVENT SERIOUS INJURY WHEN RESET SWITCH IS ENGAGED (SEE FILTER MANUAL).

16. Check thermostat bulb positioning - see page 9.

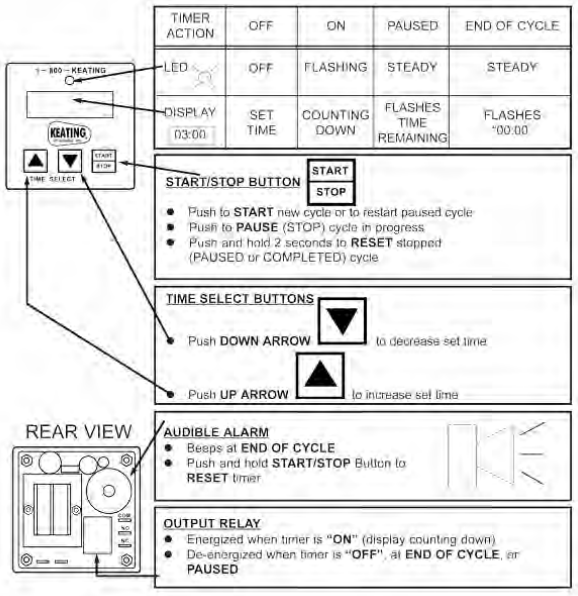
17. Refill the fryer with new or filtered oil.

ELECTRONIC CONTROL TIMERS

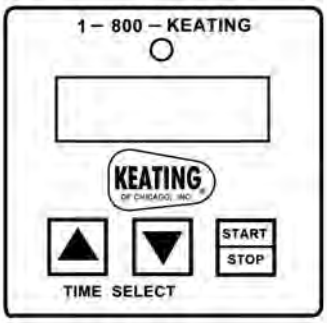
The electronic timers provide a clearly visible and accurate display and are very easy to use.

"10X11" & 14" TS MODELS

A. "Keating" Electronic Timer



B. How to program the "Keating" Electronic Timer



- The Keating Electronic Timer is programmable to four different timer ranges with two different alarm modes for each time range.
- The timers are shipped from the factory preset to program 5: Minutes : seconds (00:01 to 59:59) with continuous alarm
- To program another time range or alarm mode perform the following steps:

  1. Turn off the power
  2. Press the "down arrow " button while turning the power on.
  3. Release the button after the display turns on.
  4. A number from 0 to 7 will appear.

     This number corresponds to:

0 = Seconds (000.1 to 999.9) 5 second alarm

1 = Minutes : Seconds (00:01 to 59:59) 5 second alarm

2 = Seconds (0001 to 9999) 5 second alarm

3 = Hours : Minutes (00:01 to 23:59) 5 second alarm

4 = Seconds (000.1 to 999.9) continuous alarm

5 = Minutes : Seconds (00:01 to 59:59) continuous alarm

6 = Seconds (0001 to 9999) continuous alarm

7 = Hours : Minutes (00:01 to 23:59) continuous alarm

5. Use the “down arrow “ button to select the desired time range.
6. Turn off the power.
7. Wait 2 seconds.
8. Turn on the power. (the timer will remain in the new time range until programmed).
   The electronic timers, used on 18” and above Basket-Lift models, provide a clearly visible and accurate display and are very easy to use. One knob sets the time and one button controls all operations. The display can show cooking or clock time.

18"-34"X24" TS MODELS

A. Timer Mode

1. Turn round knob clockwise (toward “+”) to increase time or counterclockwise (toward “-”) to decrease time.

NOTE: When programming the timer up to one minute, the display goes up or down in seconds only. After one minute, the display goes up or down in ten minute increments.

2. Push start/stop button to start timer.
3. When buzzer sounds, push start/stop button to shut off buzzer. Display will go blank.
4. Push start/stop button again to restore cycle time to display.
5. To clear display, turn round knob fully counterclockwise (toward “-”).

B. Clock Mode

1. To set time, hold clock (“🕓”) button in and turn knob clockwise (toward “+”) to increase time or counterclockwise (toward “-”) to decrease time.
2. To display timer cycle time, push start/stop button.
3. If display is blank, pushing the clock button will restore clock time to display.

C. To determine whether timer is in timer mode or clock mode

1. Timer mode - display will show decimal point in upper position (“10˙08”).
2. Clock mode - display will show a decimal point in lower position (“10.08”).

OPTIONAL TIMER OPERATING INSTRUCTIONS PART # 056921

DIGITAL TIMERS

The electronic timers, standard on TS models, provide a clearly visible and accurate display and are very easy to use.

PROGRAMMING

To program the timers, the unit must be in the idle mode. Press and hold the set button for approximately two seconds. The display will show “SEt”. Press the button for the channel to be programmed. The display will show the current setting for that channel. Use the up or down button to increment or decrement the setting. When the setting is correct, press and hold the set button again for approximately two seconds. The display will show "StO" for approximately two seconds and the timer will return to normal operation. Repeat the process as necessary for the other timers.

OPERATING LOGIC

When the timer is powered up, the display will show the time setting for the channel that was operated last and the relay output contacts will be open. To start a cycle, press the desired channel button (1-3). The display will begin to countdown from the preset time setting and the relay output contacts will close. During the countdown the colon will flash at a one-second rate. When the countdown has reached "00:00" the relay output contacts will open, the display will flash, and the audible alarm will sound. To cancel the audible alarm, press any button.

PAUSE FEATURE

To pause a cycle in progress, press any button. The relay output contacts will open, the display will flash, and the countdown will pause. To resume the countdown, press any button. The display will resume the normal countdown and the relay output contacts will close.

CANCELING A CYCLE

To cancel a cycle in progress press and hold any button for approximately two seconds. The relay output contacts will open and the display will show the time setting for the channel last used.

IV MAINTENANCE

WARRANTY REPAIRS

Keating's warranty begins with the date of installation. In the event that your fryer, under warranty, needs repairs other than routine maintenance or cleaning, you are requested to contact Keating of Chicago (at 1-800-KEATING) before calling a local service company.

PREVENTIVE MAINTENANCE

Preventive maintenance should be done in daily, weekly, monthly and yearly intervals as necessary. Following preventive maintenance procedures will help keep your fryer working efficiently. Proper care and servicing will lead to years of quality performance.

PREVENTIVE MAINTENANCE CHART

TIME FRAME	OPERATOR/OWNER	SECTION
At Least Daily	● Check lights and controls. ● Check that the oil is up to "Fill Level" Line. ● Clean all baskets. ● Drain, strain or filter oil.	III
At Least Weekly	● Drain and clean fryer. ● Boil-out fryer.	III
At Least Monthly	● Verify thermostat settings. ● Test Hi-Limit control. ● Verify all thermostat settings. ● Disassemble fryer to clean burners orifices and runner pilot tube. ● Check and replace radiants.	IV
At Least Yearly	**QUALIFIED SERVICE PERSONNEL ONLY** ● Calibrate thermostat.	IV & V

*High production facilities should be checked more often.

A. Oil Breakdown

As part of a "Preventive Maintenance Program", the oil in your fryer needs to be filtered regularly to avoid breakdown. The initial investment in the frying system is less than the total overall costs of oil during the life of the fryer, and with regular filtering, you can realize substantial savings in oil costs as well as maintenance charges. We have listed some of the conditions which are catalysts in the breakdown of oil:

1. *Contact with Oxygen*: When air comes into contact with hot oil, the oxygen begins to dissolve in the oil causing it to breakdown. Cooler oil, on the other hand, deters breakdown. The Keating Instant Recovery® Electric fryer is designed to allow you to cook at lower temperatures to help reduce the rate of oil breakdown. Be sure to keep your oil covered when not in use.

2. *Crumbs and Food Particle*s: As food is prepared in a fryer, particles and crumbs will fall off into the oil. If these particles are not removed, they will begin to carbonize and cause premature breakdown. The Keating true Cold Zone captures these particles and prevents them from carbonizing.

3. *Non-Stainless Steel Surfaces*: When hot oil comes in contact with iron, steel, aluminum or other metals, a chemical breakdown takes place within the oil. Stainless steel has long been recognized as being the best metal for use in the construction of fryer vessels. That is why all Keating fryer vessels and heating elements are made of stainless steel that is highly polished to a #7 mirror bright finish.

4. *Keep Salt and Seasonings Away From Oil*: When sodium or sodium by-products are added or splashed into hot oil, the oil will take on an inky blackness and form a brownish deposit around the top of the fryer rendering the oil useless within a few days. Fresh potatoes may be treated with sodium sulfite to retain whiteness, always thoroughly wash the potatoes before frying.

5. *Prolonged High Temperatures*: When a fryer is set on a high temperature for long hours and a low volume of frying is done, the oil will breakdown from the intense heat. For every 18°F above 300°F the rate of oil breakdown doubles. The Keating BB and TS model fryers can easily be switched off with a control panel switch. The temperature at which the food is placed in the fryer is far less important than the temperature at which the food is finished. The fryer will heat back up to the thermostat setting well before the food is finished frying.

B. Limited Calibration (less than 15°F off)

You will need:
One standard flat blade screwdriver

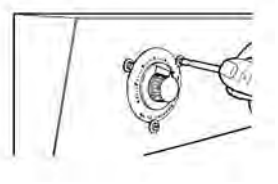
One accurate fryer thermometer

1. Set thermostat to desired frying temperature.

2. Allow fryer to cycle three times.

Figure 4-1

Thermostat calibration



3. Place an accurate thermometer in the oil.

4. If calibration of fryer is found to be less than 15° off,

simply loosen three dial plate retaining screws, rotate dial plate to match thermometer reading and tighten screws. For calibration over a 15°F difference, contact your local service distributor.

NOTE: Locate thermometer in same position for every calibration. Position next to upper heating element is recommended.

C. Thermostat Bulb Positioning

Keating's patented thermostat application is accurate within ±2°F of the dial setting between 250°F and 350°F. This accuracy is attained only if the thermostat bulb is placed properly next to the top element using element clamps. If the bulb is too far away from the element, the fryer will overshoot.

Overshoot: The thermostat takes a long time to cycle and then misses its preset temperature by 20°F - 40°F yielding a poor quality product.

D. Hi-Limit Check

The manual Hi-Limit test button can be used to test the Hi-Limit Control by pushing and holding the button in until the fryer reaches the Hi-Limit temperature (425°F). Place an accurate thermometer in the oil. If the Hi-Limit Control doesn't shut off the fryer between 425°F and 450°F, have it replaced.

V SERVICE DIAGNOSIS

A properly adjusted Keating Instant Recovery® Electric Fryer, with no load, will cycle "on" approximately every 2-1/2 to 3 minutes. Each cycle will last 15-25 seconds, ensuring that the temperature setting is held within a narrow band.

Every Keating Instant Recovery® Electric Fryer has a number of safety controls to ensure safe operation and guard against component failure.

A. Trouble shooting

The following diagnosis is only to be used as a guide to qualified service personnel. Keating recommends that you use a qualified service company. Call 1-800-KEATING if you need assistance in locating a qualified service company.

PROBLEM	PROBABLE CAUSE	SOLUTION
Fryer won't heat	a. No electricity to fryer ("POWER ON" light is off).	a. Connect fryer to an approved source of power.
	b. No electricity to control circuit (models with Basket-Lift or Central Filter).	b. Connect 120V terminal block to an approved source of power.
	c. Fryer circuit breakers have tripped.	c. Reset circuit breakers.
	d. Hi-Limit has been activated.	d. Push in Hi-Limit reset button located behind fryer door. Check calibration of thermostat and operation of Hi-Limit and contractor.
	e. Rear drain valve handle has not been fully closed (fryers with filter only).	e. Fully close and latch rear drain valve handle.
	f. Control circuit fuse is blown.	f. Replace fuse. (Use type SC-5 for 10x11 and 14TS BL models and type SC-3 for all other models.)
	g. On/Off/Melt Switch is faulty.	g. Replace On/Off/Melt Switch.
	h. Contactor is faulty.	h. Replace contactor.
	i. Thermostat is faulty.	i. Push and hold in Hi-Limit test button. If elements turn on, thermostat is faulty. Replace thermostat.

V SERVICE DIAGNOSIS

PROBLEM	PROBABLE CAUSE	SOLUTION
Fryer has poor recovery or runs cold.	a. Over-filling baskets.	a. Don't over fill baskets.
	b. Fryer vessel overfilled with oil.	b. Fill fryer up to "Fill Level" line as oil expands when heated.
	c. Thermostat out of calibration.	c. Calibrate thermostat. See page 9 - Calibration.
	d. Carbon coating on elements.	d. Boil-out fryer. See page 6 - Cleaning and Boil-out.
	e. Element is faulty	e. Replace element.
	f. Thermostat is faulty	f. Replace thermostat.
	g. Contactor is faulty.	g. Replace contactor.
Fryer is overheating	a. Thermostat bulb improperly placed.	a. Adjust bulb position. See page 9- Thermostat Bulb Positioning.
	b. Thermostat out of calibration.	b. Calibration thermostat (See page 9 - Calibration.
Oil in fryer vessel smokes.	a. Oil has begun to break down.	a. Replace oil.
	b. High carbon content in oil.	b. Filter oil completely, replace if necessary.
	c. Dirty fryer vessel.	c. Boil-out fryer. See page 10 -Cleaning and Boil-out.
	d. Inferior grade of oil.	d. Check with oil supplier for higher grade of oil needed fir your cooking applications.
	e. Fryer is overheating.	e. Check calibration of thermostat (See page 9) and replace if necessary. Check if Hi-Limit trips at 425°F. If not, replace Hi-Limit.
Oil in fryer vessel boils over.	a. Baskets overfilled.	a. Don't over fill baskets.
	b. Fryer vessel overfilled with oil.	b. Fill fryer up to "Fill Level" line as oil expands when heated.
	c. Oil is breaking down and foaming.	c. Replace oil.
	d. Water in cold zone.	d. Stir oil with a paddle until water boils off. Filter oil. If water remains, let oil cool and drain a quart of it.
Contactor chatters.	a. Voltage is low to fryer.	a. Contact your electrician or the local power company and have the incoming power checked.
	b. Contactor coil faulty.	b. Replace contactor.
	c. Connections are loose.	c. Tighten connections.
	d. Thermostat contacts do not close properly.	d. Replace thermostat.

V SERVICE DIAGNOSIS

PROBLEM	PROBABLE CAUSE	SOLUTION
Basket-Lift mechanism not operate.	a. Connections are loose or time is	a. Tighten connections. Replace timer if will faulty.
	b. Motor limit switch is faulty.	b. Replace limit switch (10x11 and 14 TS BL Replace actuator (18 TS BL model and above.)
	c. Lift motor is faulty (10x11 and 14 TS BL models).	c. Replace motor. Specify left or right side motor when ordering.
	d. Actuator is faulty (18 TS BL model and above).	d. Replace actuator.
	e. Control circuit fuse has blown.	e. Replace fuse (use type SC-5 in 10x11 BL models and type SC-3 in 18 TS model and above).
	f. Relay is faulty (18 TS BL model and above.	f. Replace relay.
Basket-Lift motor runs, but basket doesn't move.	a. Cam is slipping on motor shaft (10x11 and 14 TS BL models).	a. Tighten cam onto motor shaft.
Basket-Lift basket goes down, but won't go up.	a. Basket-Lift motor limit switch is misaligned (10x11 and 15 TS BL models).	a. Align limit switch.
Basket-Lift buzzer won't shut off.	a. Buzzer limit switch is misaligned (10x11 and 14 TS BL models).	a. Align limit switch.

VI PARTS LIST

ORDERING PARTS

Parts may be ordered by part number by calling Keating at 1-800-KEATING or your service company. You may also order online at Keating's part store, www.keatingofchicago.com.

Refer to the Keating Instant Recovery® Electric Fryer Limited Warranty for complete service and ordering information.

The model/serial plate is attached to the inside of the front door. The serial and model numbers are necessary when ordering.

NOTE: On Drop-In fryers, the model/serial plate is attached to the top of the control panel.

WARNING AND OPERATING PLATES

All warning and operating plates on the Keating Instant Recovery® Electric Fryer should be in place at all times. If plates are damaged or lost, replace them immediately.

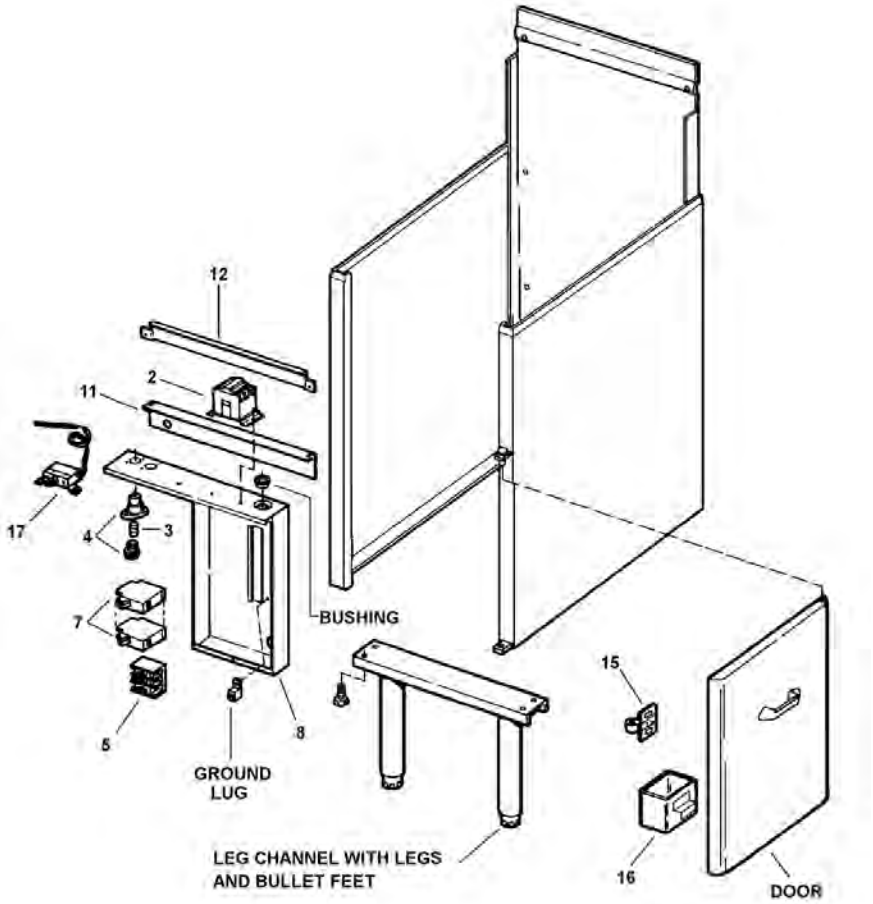
ELECTRIC FRYER PARTS LIST

ITEM	DESCRIPTION	MODELS	PART #	10x11	14	18	20	24	34x24
1	HEATING ELEMENT								
	2500 W	BB	004347	3					
	3800 W	TS	005623	3					
	4350 W	BB	004349		3				
	6000 W	BB	004353			3	3		
		TS	004353			4	4		
		BB	004355					4	5
		TS	004355					5	6
	6500 W	TS	014493		3				
	TEFLON RING	BB, TS	004318	2 PER ELEMENT					
	5/8" FLAT WASHER	BB, TS	004319	2 PER ELEMENT					
	5/8" - 16 BRASS LOCKNUT	BB, TS	004323	2 PER ELEMENT					
	LOCKWASHER, INT, #10 HI-TEMP	BB, TS	011562	4 PER ELEMENT					
	RING TERM, #10 HI-TEMP	BB, TS	011881	2 PER ELEMENT					
	FLAT WASHER, #10 HI-TEMP	BB, TS	059502	2 PER ELEMENT					
	NUT 10-32	BB, TS	000361	2 PER ELEMENT					
2	CONTACTOR 3P, 32A, 220V COIL	BB, TS	010218	2					
	3P, 50A, 220V, COIL	BB	011184		2	2	2		4
	3P, 50A, 220V, COIL	TS	011184		2			4	4
	4P, 40A, 220V, COIL	BB, TS, CPU	004330			2	2	2	
	3P, 32A, 120V, COIL	BASKET-LIFT	010218	2					
	3P, 50A, 120V, COIL	BASKET-LIFT	011225		2			4	4
	4P, 40A, 120V, COIL	BASKET-LIFT	005597			2	2		
3	FUSE, 3A, SC-3	TS	004334	2	2	2	2	2	2
		BASKET-LIFT*				4	4	4	4
	FUSE, 5A, SC-5	BASKET-LIFT	008360		2				
4	FUSE HOLDER	TS	004335	2	2	2	2	2	2
		BASKET-LIFT*			2	4	4	4	4
5	TERMINAL BLOCK, 208-480V		034381		1	1	1	1	1
6	TERMINAL BLOCK		002565	3	1				
7	CIRCUIT BREAKER, 208-240V								
	1P, 40A		012129	CALL 1 - 800 / KEATING					
	2P, 40A		015203	CALL 1 - 800 / KEATING					
	3P, 40A		015204	CALL 1 - 800 / KEATING					
8	CONTACTOR TRAY	ALL	----------	1	1	1	1	1	1
9	ELEMENT CLAMP	ALL	004167	2	2	2	2	2	2
10	ELEMENT SPACER	ALL	004145			4	4		
11	CONTACTOR SHIELD	ALL	----------	1	1	1	1	1	1
12	PANEL BAR	ALL	----------	1	1	1	1	1	
13	FRYER VESSEL	CALL 1 - 800 / KEATING		1	1	1	1	1	1
14	DRAIN VALVE, FRONT, 1"	BB, TS	004553	1	1				
	DRAIN VALVE, REAR, 1"	BB, TS	016341	1	1				
	DRAIN VALVE, FRONT, 1 1/4"	BB, TS	004554			1	1	1	2
	DRAIN VALVE, REAR, 1 1/4"	BB, TS	016342			1	1	1	2
	DRAIN VALVE, FRONT, 2"	OPTIONAL	019722			1	1	1	2
15	DOOR CATCH, ROLLER STYLE	BB, TS	004540	1	1	1	1	1	2
16	DRIP CUP (INSIDE DOOR)	BB, TS (NOT ON CM)	004552	1	1	1	1	1	2
17	HI-LIMIT CONTROL W/RESET	BB, TS	004341	1	1	1	1	1	1
18	THERMOSTAT	SEE MODEL	SEE PAGES 15 - 17						
19	BASKET HANGER MOUNTING BLOCK		BB, TS						
		LEFT	004539	1	1	1	1	1	1
		CENTER	003813			1	1	1	2
		RIGHT	004538	1	1	1	1	1	1
20	BASKET HANGER ROD	BB, TS	SEE BELOW	2	2	2	2	2	2

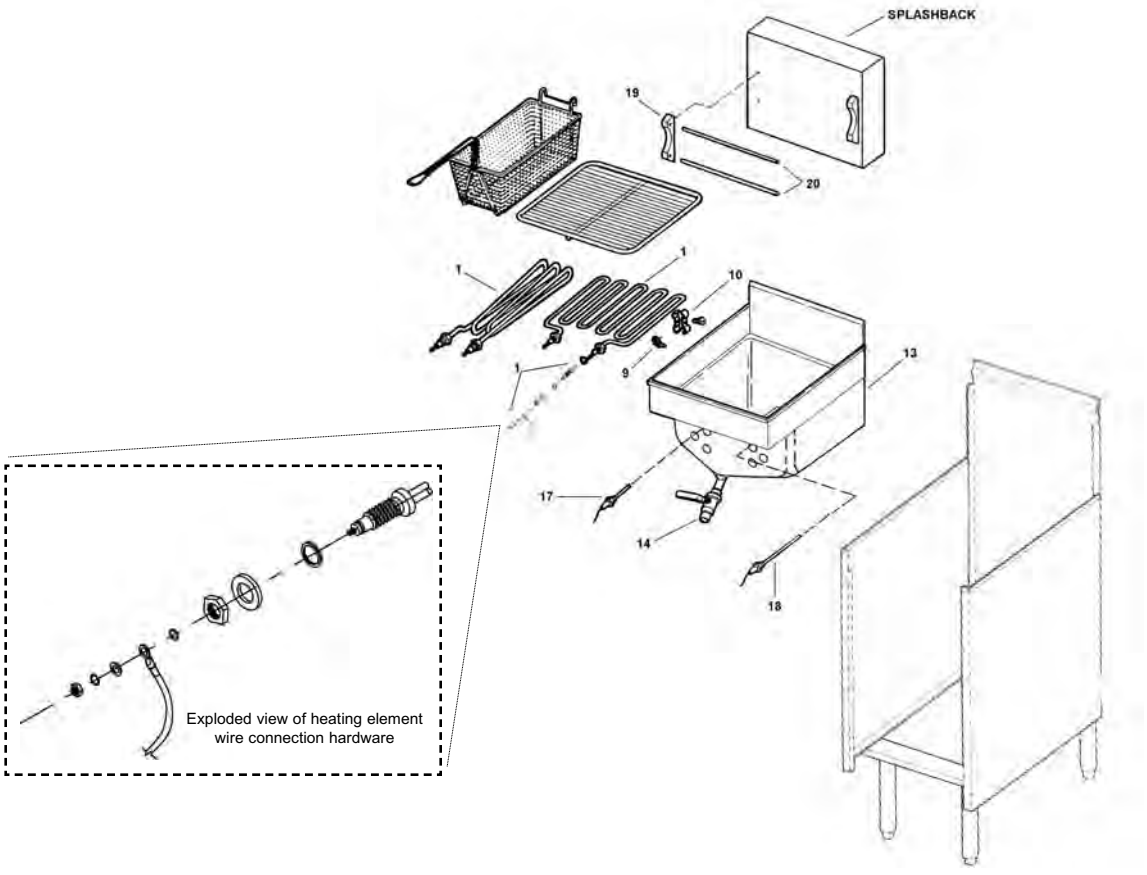
*18" - 24" BASKET-LIFT MODELS INCLUDE 2 IN TRANSFORMER BOX. SEE PAGE 38.

ITEM	DESCRIPTION	MODELS	10x11	14	18	20	24	34x24
20	BASKET HANGER ROD	2/FRYER	003849	003895	003935	003953	003954	011954

ELECTRIC FRYER ASSEMBLY I



ELECTRIC FRYER ASSEMBLY II



NOTE: Part numbers correspond with the Electric Fryer Parts List on page 13.

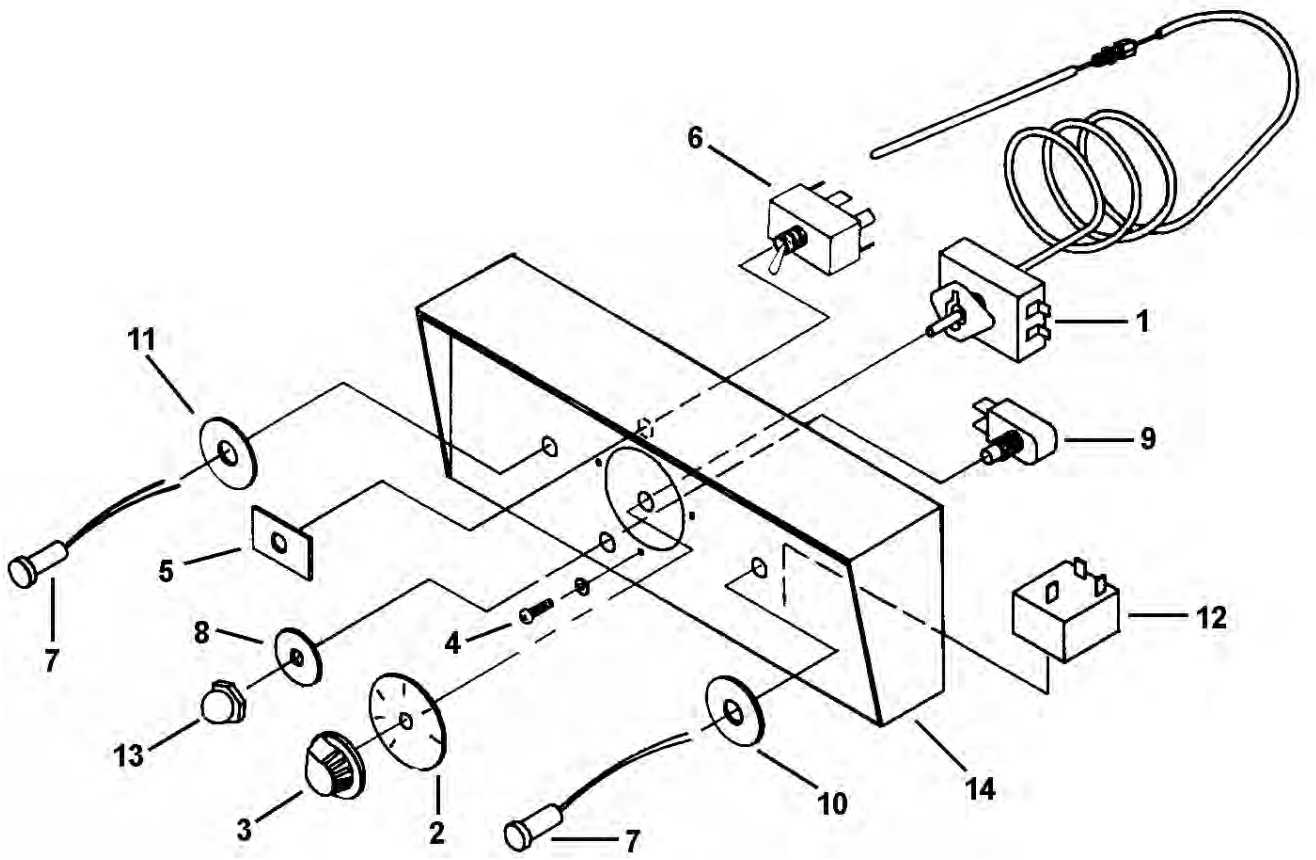


Figure 6-1 **BB Control Panel**

ITEM	DESCRIPTION	QUANTITY	PART NUMBER
1	THERMOSTAT	1	031099
2	THERMOSTAT DIAL PLATE	1	058037
3	THERMOSTAT KNOB, BLACK	1	060612
4	RETAINING SCREWS	3	004610
5	ON/OFF/MELT SWITCH PLATE	1	009919
6	TOGGLE SWITCH, ON/OFF/MELT	1	004326
7	INDICATING LIGHT - AMBER 220V	2	004157
8	HI-LIMIT TEST PLATE	1	004305
9	HI-LIMIT TEST BUTTON	1	004304
10	POWER ON LIGHT PLATE	1	004307
11	ELEMENT ON LIGHT PLATE	1	004306
12	MELT CONTROL, 220V	1	034271
13	NUT WITH BOOT	1	009389
14	CONTROL PANEL, HOODED	1	----------

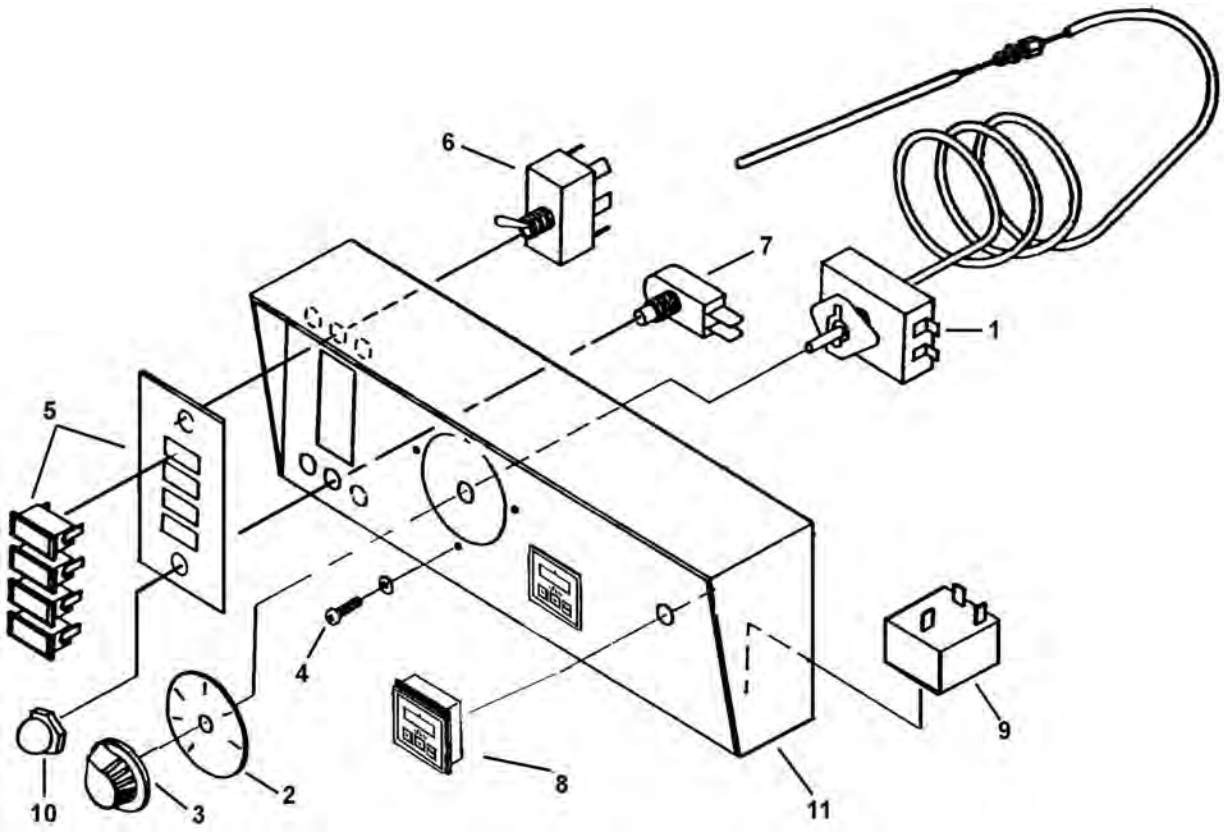


Figure 6-2 **TS Control Panel**

ITEM	DESCRIPTION	QUANTITY	PART NUMBER
1	THERMOSTAT	1	031099
2	THERMOSTAT DIAL PLATE	1	058037
3	THERMOSTAT KNOB, BLACK	1	060612
4	RETAINING SCREWS	3	004610
5	LIGHTS, WHITE	3	016639
	LIGHT, RED	1	016640
	MOUNTING PLATE	1	----------
6	TOGGLE SWITCH, ON/OFF/MELT	1	004326
7	HI-LIMIT TEST BUTTON	1	004304
8	TIMER	2	023709
9	MELT CONTROL, 220V	1	037890
10	NUT WITH BOOT	1	009389
11	CONTROL PANEL, HOODED	1	----------

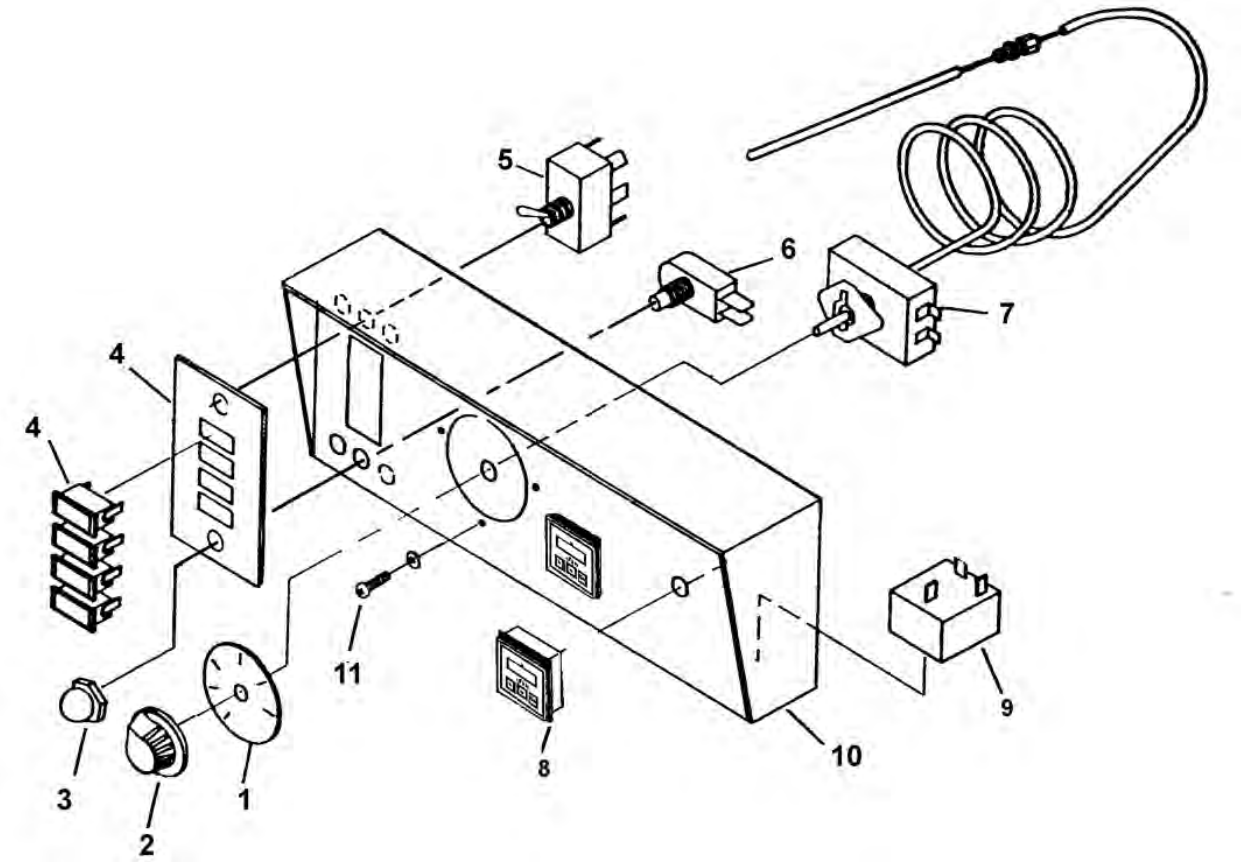


Figure 6-3 **10”x11”, 14” Basket-Lift Control Panel**

ITEM	DESCRIPTION	QUANTITY	PART NUMBER
1	THERMOSTAT	1	031099
2	THERMOSTAT DIAL PLATE	1	058037
3	THERMOSTAT KNOB, BLACK	1	060612
4	RETAINING SCREWS	3	004610
5	SET OF (4) LIGHTS, 120V, WITH PLATES	1	004156
6	TOGGLE SWITCH, ON/OFF/MELT	1	004326
7	HI-LIMIT TEST BUTTON	1	004304
8	TIMER	2	023709
9	MELT CONTROL, 120V	1	004169
10	NUT WITH BOOT	1	009389
11	CONTROL PANEL, HOODED	1	----------

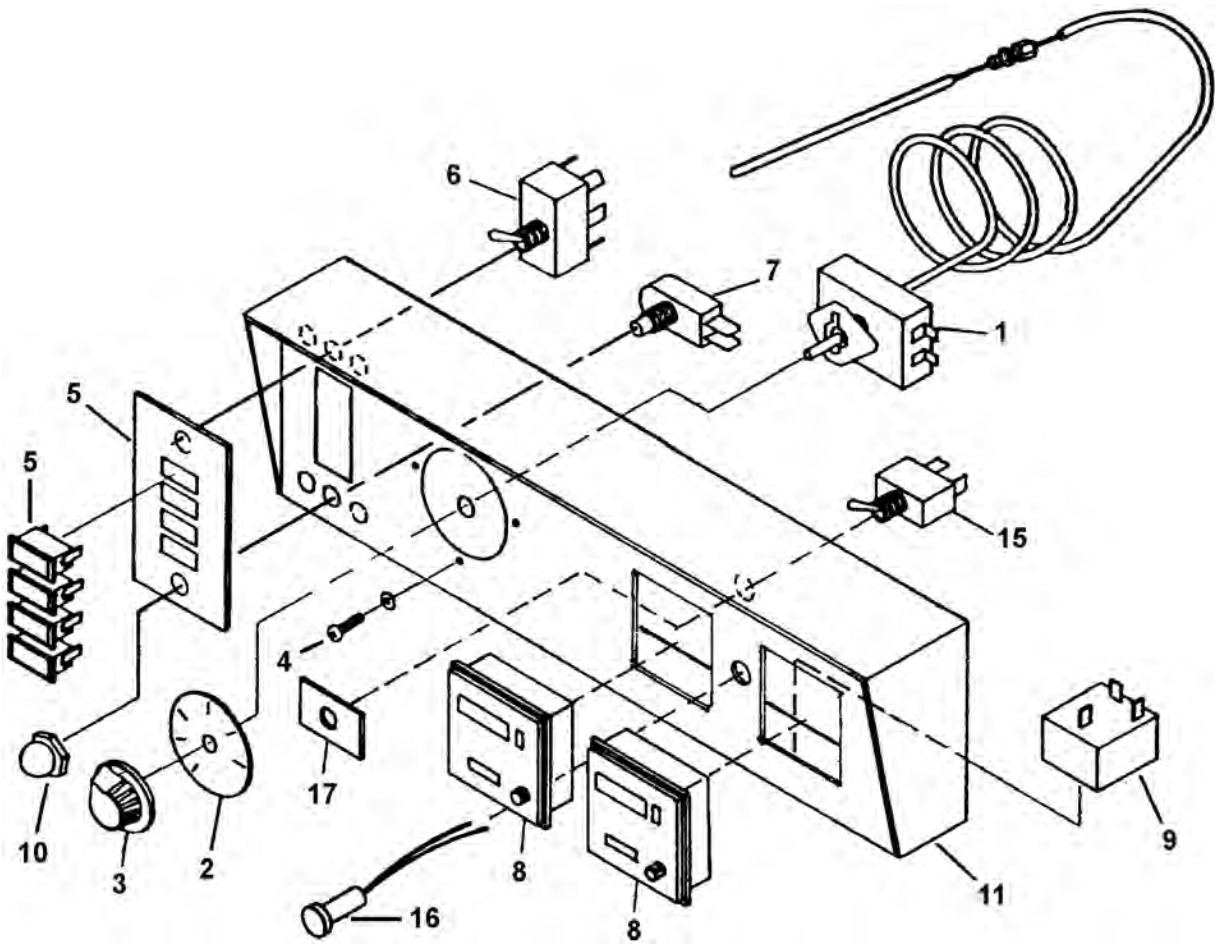


Figure 6-4 **18” - 34”x 24” Basket-Lift Control Panel**

ITEM	DESCRIPTION	QUANTITY	PART NUMBER
1	THERMOSTAT	1	031099
2	THERMOSTAT DIAL PLATE	1	058037
3	THERMOSTAT KNOB, BLACK	1	060612
4	RETAINING SCREWS	3	004610
5	SET OF (4) LIGHTS, 120V, WITH PLATES	1	004156
6	TOGGLE SWITCH, ON/OFF/MELT	1	004326
7	HI-LIMIT TEST BUTTON	1	004304
8	TIMER, ELECTRONIC	2	023709
9	MELT CONTROL, 120V	1	004169
10	NUT WITH BOOT	1	009389
11	CONTROL PANEL, HOODED	1	----------
12	TOGGLE SWITCH, BASKET-LIFT ON/OFF	1	004499
13	INDICATING LIGHT - 120V RED, BASKET-LIFT ON/OFF	1	000525
14	BASKET-LIFT ON/OFF SWITCH PLATE	1	007997

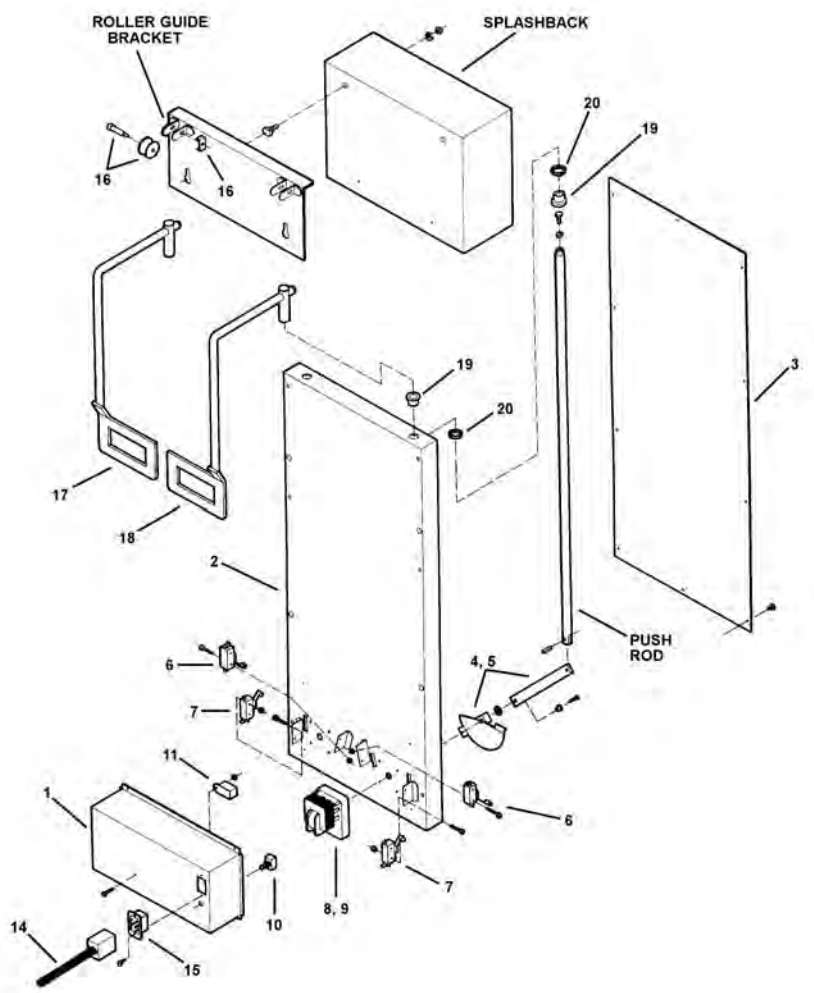


Figure 6-5 **14” Basket-Lift Housing and Roller Guide**

ITEM	DESCRIPTION	QUANTITY	PART NUMBER
1	MOTOR AND WIRE COVER	1	----------
2	HOUSING, S/S OR CRS	1	----------
3	REAR COVER, S/S OR CRS	1	----------
4	LEFT SIDE CRANK BAR AND CAM (Viewing front of fryer)	1	016209
5	RIGHT SIDE CRANK BAR AND CAM (Viewing front of fryer)	1	016401
6	MICROSWITCH, MOTOR LIMIT	2	004592
7	MICROSWITCH, BUZZER LIMIT	2	004592
8	MOTOR, CCW, LEFT (Viewing front of fryer)	1	000390
9	MOTOR, CW, RIGHT (Viewing front of fryer)	1	000391
10	BUZZER ON/OFF SWITCH WITH PLATE	1	004499
11	BUZZER	1	004223
12	FUSE HOLDER	2	SEE PAGE 13
13	FUSE, GROUND FAULT, 5A, SC-5	2	SEE PAGE 13
14	WIRE HARNESS ASSEMBLY W/PLUG, 6-PRONG	1	008296
15	RECEPTACLE, 6-PRONG, MALE, WITH WIRE HARNESS	1	018754
16	ROLLER FOR LIFT ROD	2	015817
	ROLLER PIN	2	016393
	ROLLER PIN LOCK	2	016392
17	LIFT ROD, LEFT (Viewing front of fryer)	1	018990
18	LIFT ROD, RIGHT (Viewing front of fryer)	1	018991
19	BUSHING, PUSH ROD	4	016405
20	BUSHING RETAINING RING	4	015831

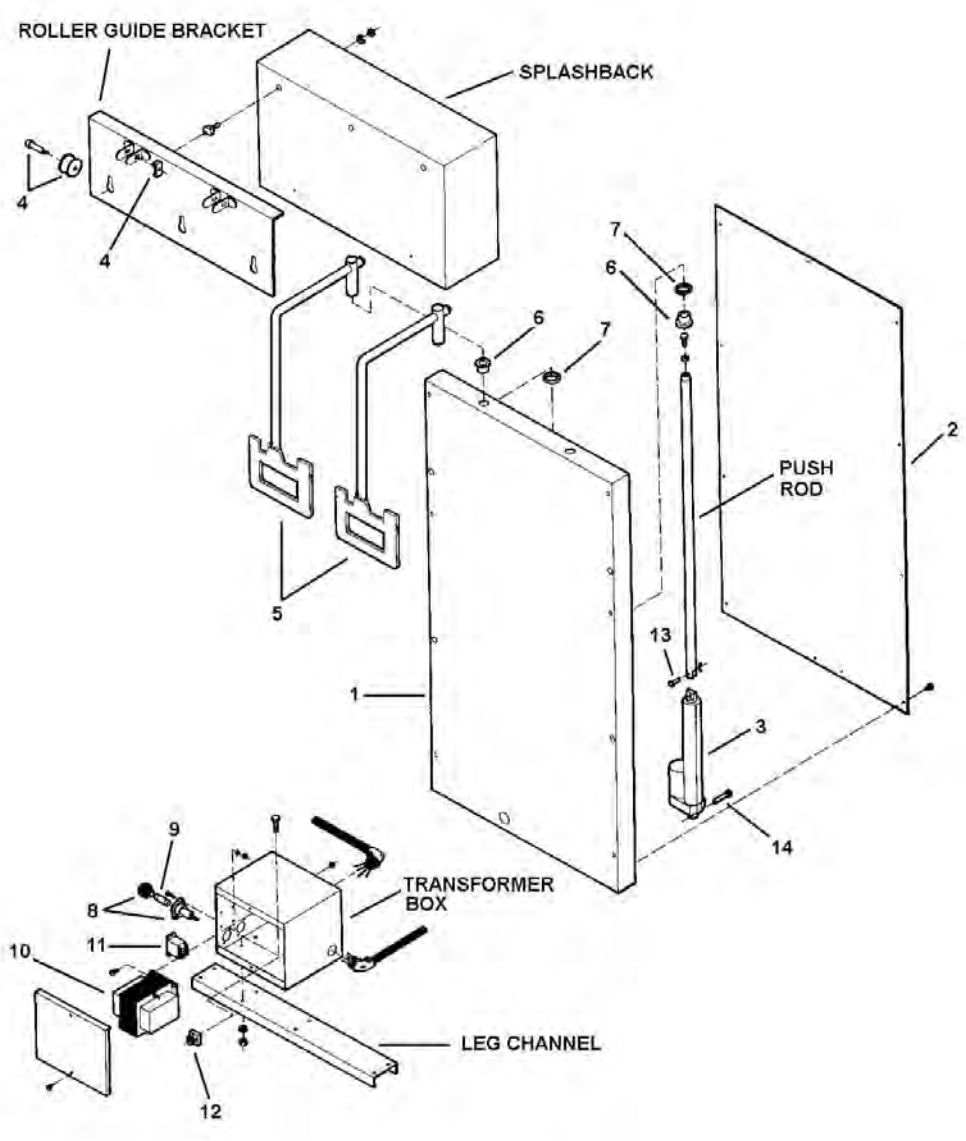


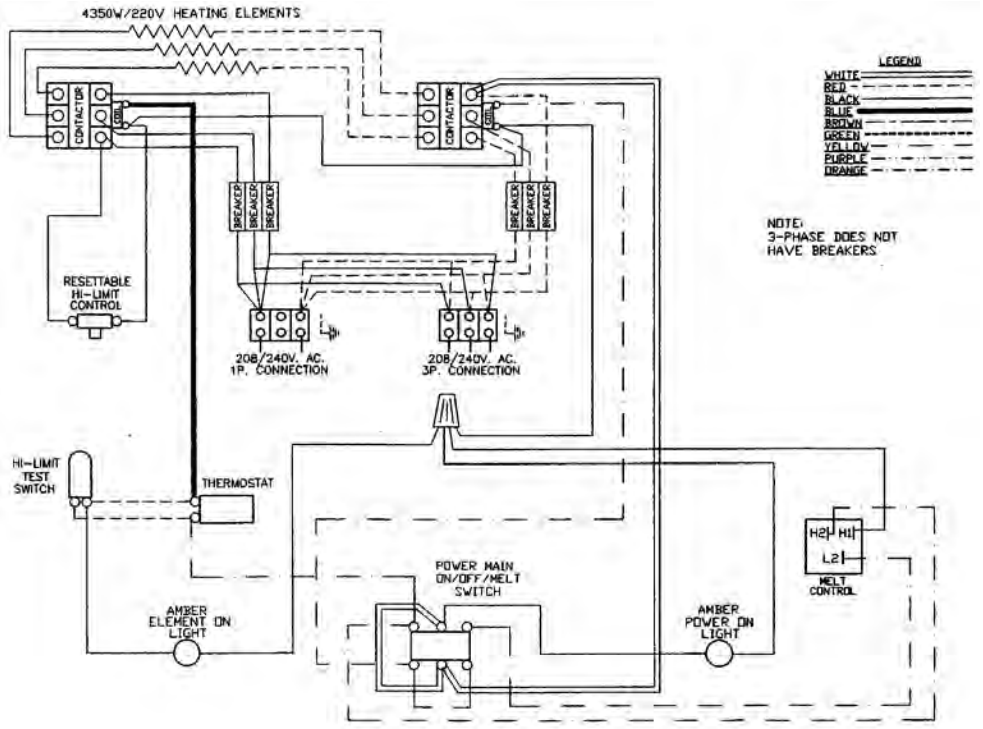
Figure 6-6 **18" - 34"x24" Basket-Lift Housing, Roller Guide and Transformer Box**

ITEM	DESCRIPTION	QUANTITY	PART NUMBER
1	HOUSING, S/S OR CRS	1	----------
2	REAR COVER, S/S OR CRS	1	----------
3	LINEAR ACTUATOR, 24VDC, WITH LIMIT SWITCHES	2	018471
4	ROLLER FOR LIFT ROD	2	015817
	ROLLER PIN	2	016393
	ROLLER PIN LOCK	2	016392
5	LIFT ROD, FOR SPLIT BASKETS	2	020086
6	BUSHING, PUSH ROD	4	016405
7	BUSHING RETAINING RING	4	015831
8	FUSE HOLDER	2	004335
9	FUSE, ACTUATOR GROUND FAULT, 3A, SC-3	2	004334
10	TRANSFORMER STEPDOWN 120V-24V 150VA (for basket lift with 2 actuators)	1	011777
	TRANSFORMER STEPDOWN 240/480-24V 150VA (for basket lift with 2 Actuators)	1	019345
11	RELAY, BASKET-LIFT	2	008088
12	RECTIFIER, 24VDC, WITH WIRES	1	019427
13	UPPER ACTUATOR CLEVIS PIN, 1/4"X3/4"	2	019218
14	LOWER ACTUATOR CLEVIS PIN, 1/4"X1-3/8"	2	019219

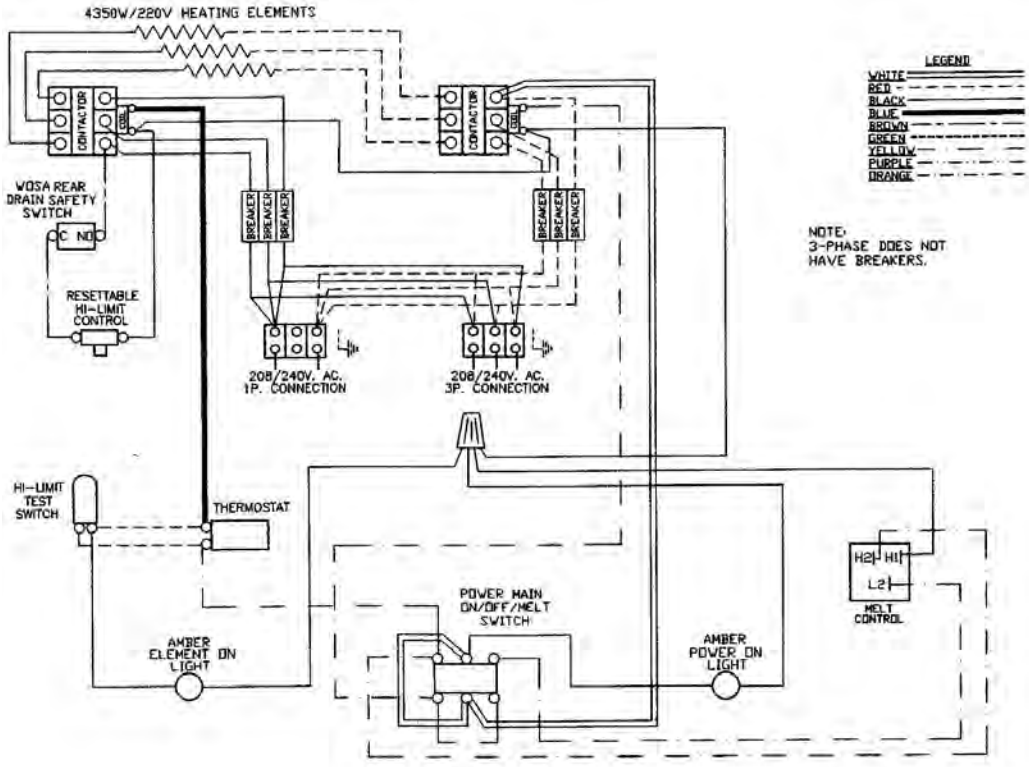
VII WIRING DIAGRAMS

NOTE: A separate wiring diagram has been included with this manual and should be saved for troubleshooting and maintaining the fryer. The wiring diagrams in this section cover standard fryers which may or may not match the diagram sent with the fryer. Non-standard fryers such as CPU models and all 24” and 34”x24” BB and TS models do not have wiring diagrams printed in this section.

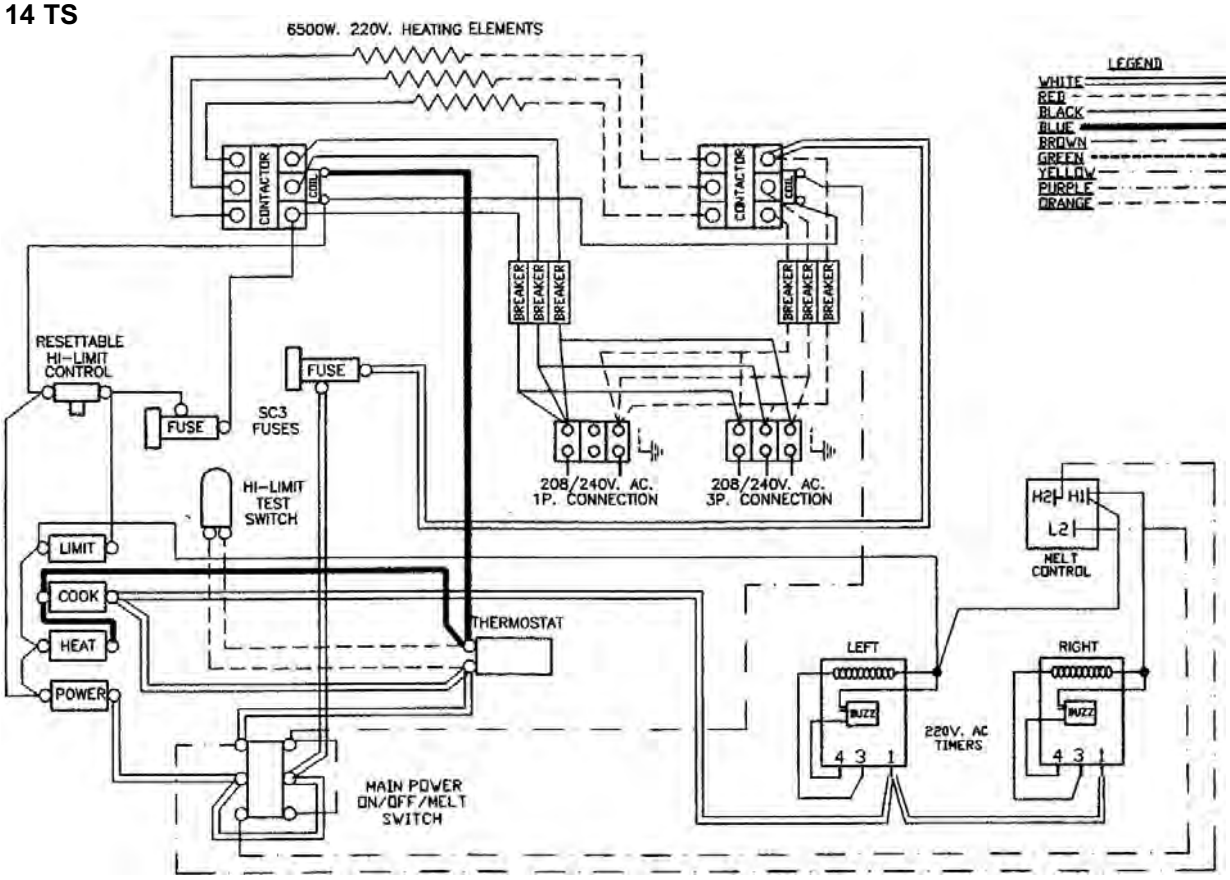
14 BB



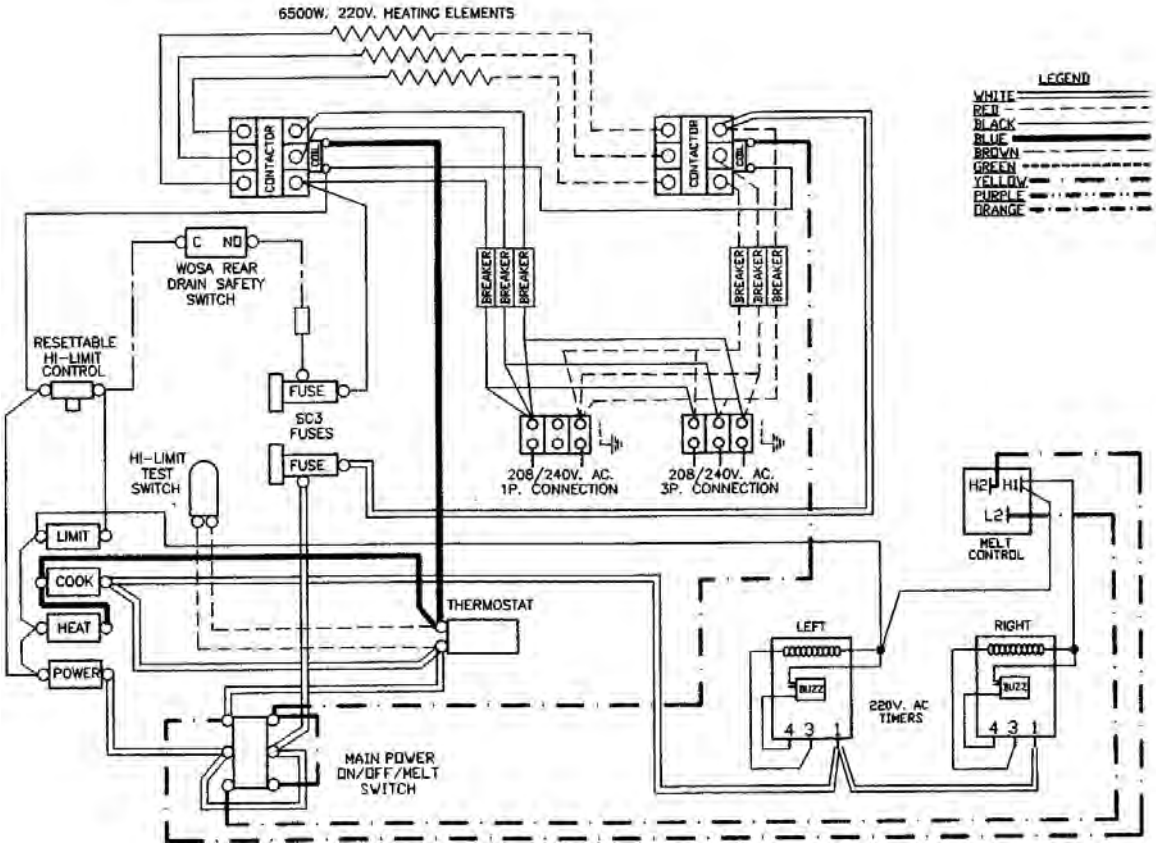
14 BB WITH WHIRL-O-SWIRL-A-WAY



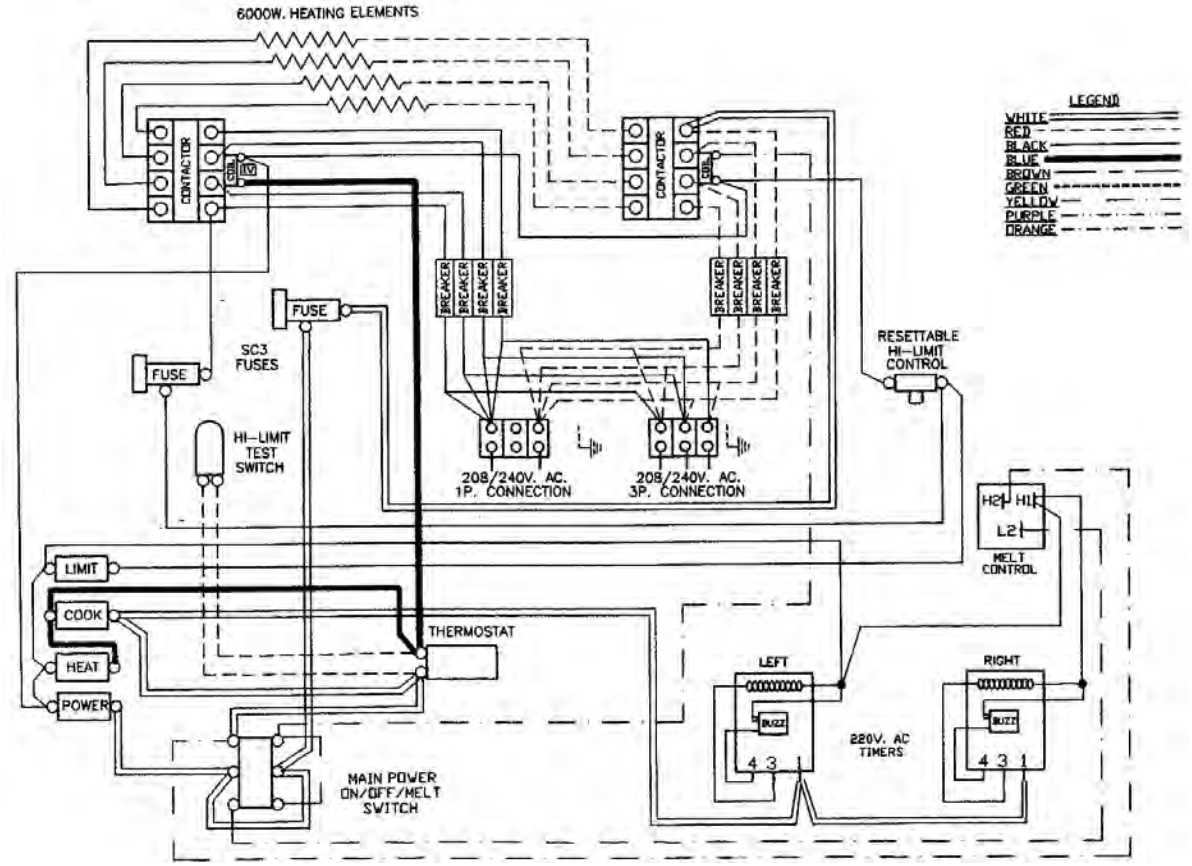
14 TS



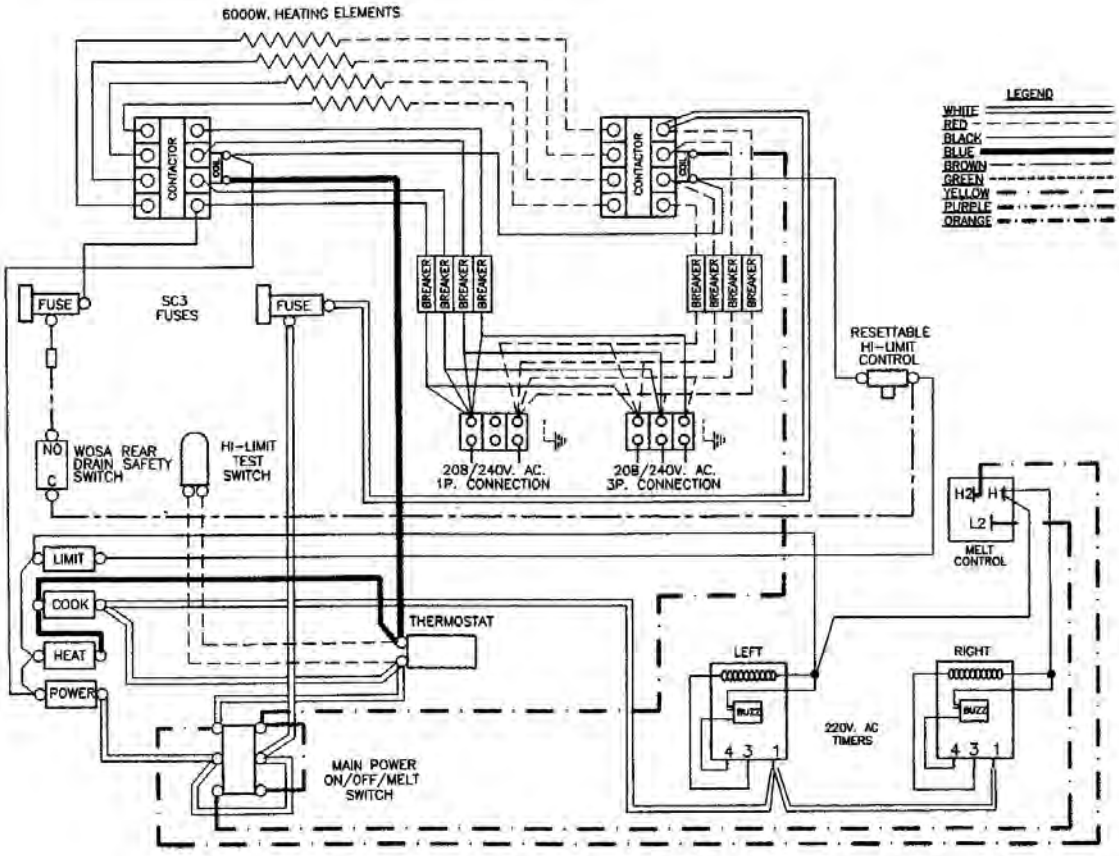
14 TS WITH WHIRL-O-SWIRL-A-WAY



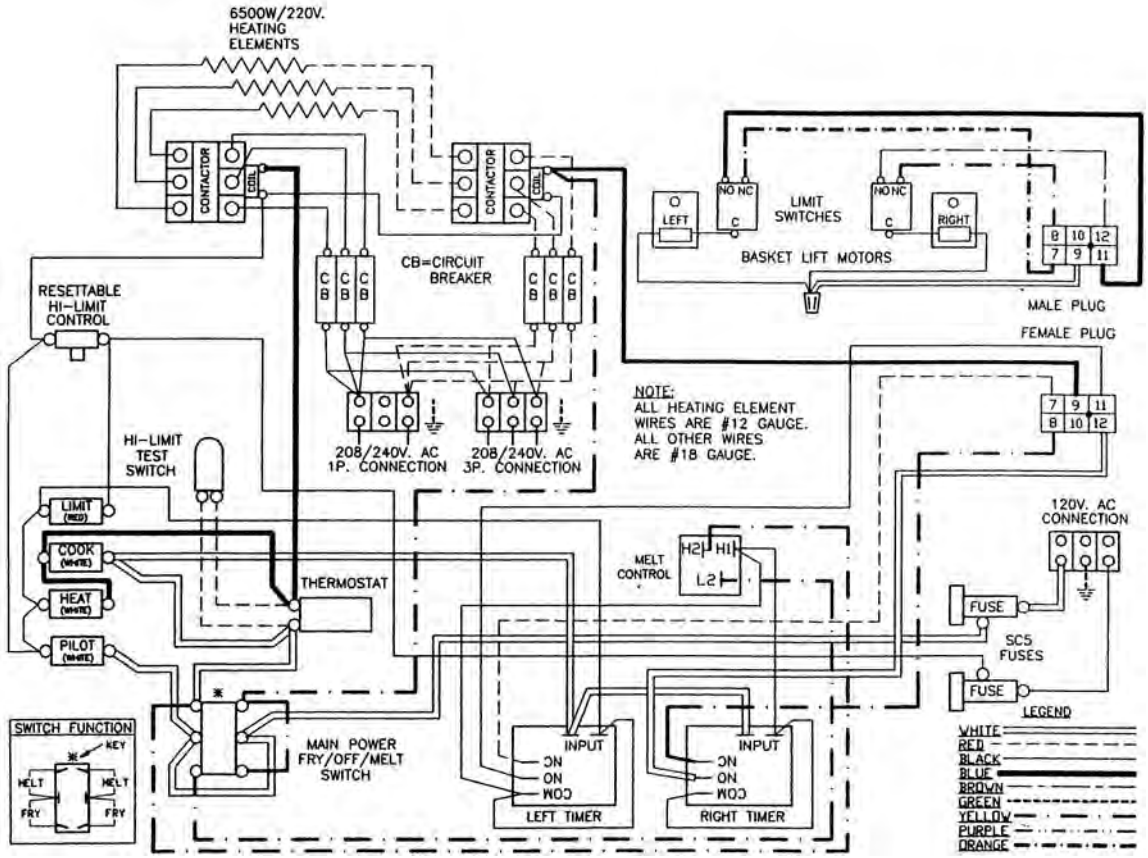
18, 20 TS



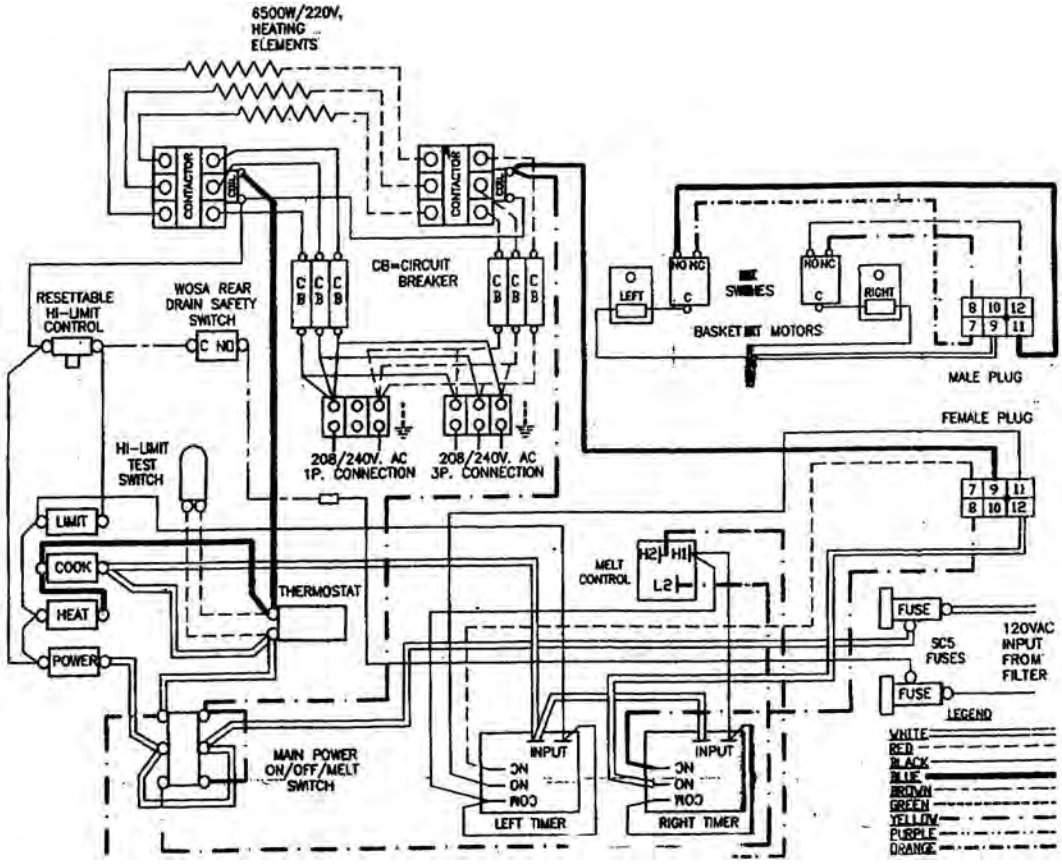
18, 20 TS WITH WHIRL-O-SWIRL-A-WAY



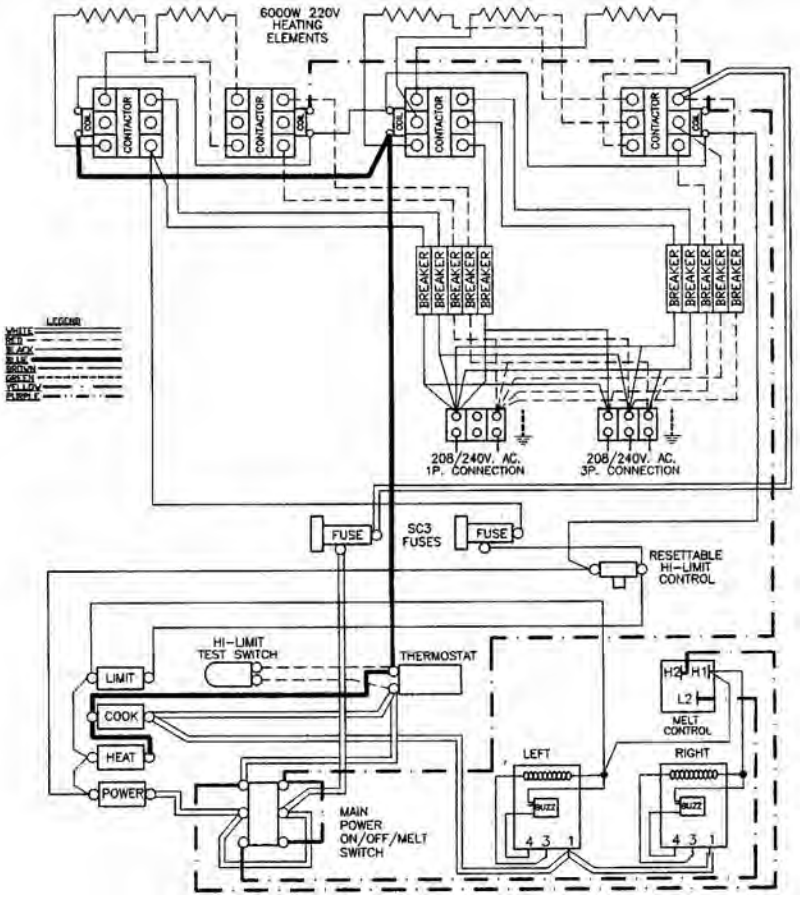
14 TS WITH BASKET-LIFT



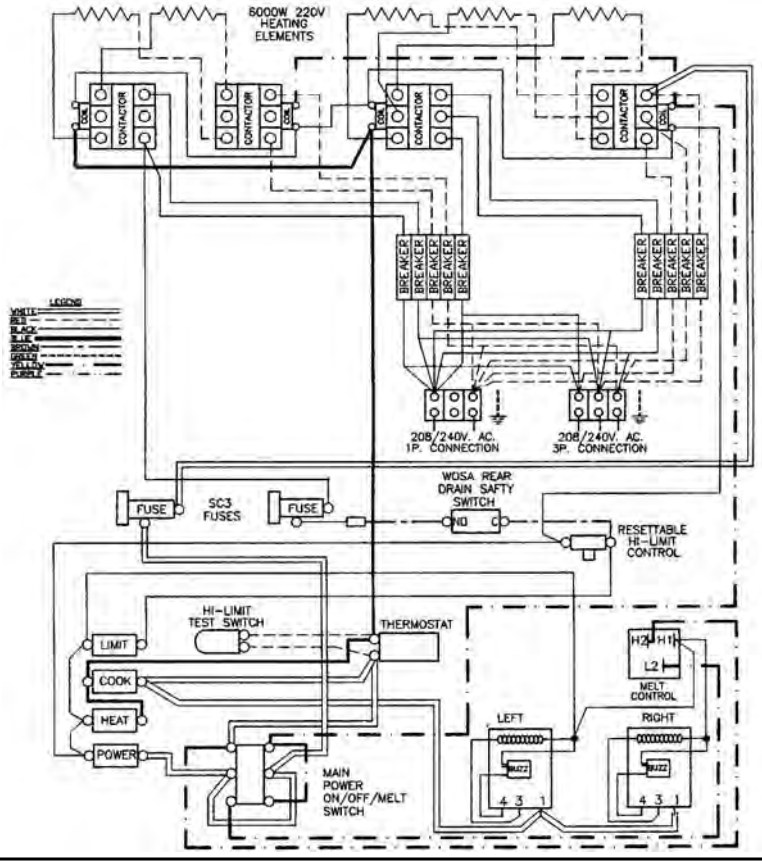
14 TS WITH BASKET-LIFT WITH WHIRL-O-SWIRL-A-WAY



24 TS WITH BASKET-LIFT



24 TS WITH BASKET-LIFT



IX KEATING FRYER SPECIFICATIONS

BB FM-E MODELS

VOLTS	kW	AMPS PER LINE-THREE PHASE			AMPS SINGLE PHASE
		L1	L2	L3	
208	6.7	19	19	19	32
220	7.5	20	20	20	34
240	8.9	22	22	22	37

- 3 ELEMENTS (2500 W EACH)

VOLTS	kW	AMPS PER LINE-THREE PHASE			AMPS SINGLE PHASE
		L1	L2	L3	
208	11.7	32	32	32	56
220	13.1	34	34	34	59
240	15.5	37	37	37	65

- 3 ELEMENTS (4350 W EACH)

18/20 BB FM-E

VOLTS	kW	AMPS PER LINE-THREE PHASE			AMPS SINGLE PHASE
		L1	L2	L3	
208	16.1	45	45	45	77
220	18.0	47	47	47	82
240	21.4	52	52	52	89

- 3 ELEMENTS (6000 W EACH)
- 78 LB. OIL CAPACITY (18”)
- 110 LB. OIL CAPACITY (20”)

24 BB FM-E

VOLTS	kW	AMPS PER LINE-THREE PHASE			AMPS SINGLE PHASE
		L1	L2	L3	
208	21.5	68	68	45	103
220	24.0	72	72	47	109
240	28.6	79	79	52	119

- 4 ELEMENTS (6000 W EACH)

34x24 BB FM-E

VOLTS	kW	AMPS PER LINE-THREE PHASE			AMPS SINGLE PHASE
		L1	L2	L3	
208	28.6	68	89	68	129
220	30.0	72	95	72	136
240	35.7	79	103	79	149

- 5 ELEMENTS (6000 W EACH)
- 210 LB. OIL CAPACITY

*** RATINGS ARE THE SAME FOR FLOOR MODELS AND COUNTER MODELS**

TS FM-E MODELS

VOLTS	kW	AMPS PER LINE-THREE PHASE			AMPS SINGLE PHASE
		L1	L2	L3	
208	10.2	28	28	28	49
220	11.4	30	30	30	52
240	13.6	33	33	33	57

- 3 ELEMENTS (3800 W EACH)

VOLTS	kW	AMPS PER LINE-THREE PHASE			AMPS SINGLE PHASE
		L1	L2	L3	
208	17.4	48	48	48	84
220	19.5	51	51	51	89
240	23.2	56	56	56	97

- 3 ELEMENTS (6500 W EACH)

18/20 TS FM-E

VOLTS	kW	AMPS PER LINE-THREE PHASE			AMPS SINGLE PHASE
		L1	L2	L3	
208	21.5	68	68	45	103
220	24.0	72	72	47	109
240	28.6	79	79	52	119

- 4 ELEMENTS (6000 W EACH)
- 78 LB. OIL CAPACITY (18”)
- 110 LB. OIL CAPACITY (20”)

24 TS FM-E

VOLTS	kW	AMPS PER LINE-THREE PHASE			AMPS SINGLE PHASE
		L1	L2	L3	
208	26.8	68	89	68	129
220	30.0	72	95	72	136
240	35.7	79	103	79	149

- 5 ELEMENTS (6000 W EACH)

34x24 TS FM-E

VOLTS	kW	AMPS PER LINE-THREE PHASE			AMPS SINGLE PHASE
		L1	L2	L3	
208	32.2	89	89	89	155
220	36.0	95	95	95	164
240	42.8	103	103	103	179

- 6 ELEMENTS (6000 W EACH)
- 210 LB. OIL CAPACITY

*** RATINGS ARE THE SAME FOR FLOOR MODELS AND COUNTER MODELS**

WARRANTY

LIMITED WARRANTY

Keating of Chicago, Inc. ("Keating") warrants to the original purchaser. ("Customer"), all new Keating Fryers, Filter Systems, Griddles, Keep Krisp®, Custom Pasta Systems, Top-Side™ Cookers, Computer Timers, Fryer & Pasta Vessels and Keating replacement parts ("products") installed after June 1, 1994 to be free to defects in material or workmanship, subject to the following terms and conditions.

LENGTH OF WARRANTY

All products other than Fryer & Pasta Vessels and replacement parts shall be warranted for a period of one year from the date of original equipment installation. Keating replacement parts are warranted for a period of ninety days from the date of installation. Fryer & Pasta Vessels are warranted as described below.

FRYER & PASTA VESSEL WARRANTY

Fryers purchased after June 1, 1994 carry a prorated vessel warranty on defects in materials or workmanship to the Customer based on the following scale:

Time from Installation Date	*Fryer Vessel Warranty Credit*
13-60 months	100%
61-72 months	80%
73-84 months	60%
85-96 months	40%
97-108 months	20%
109-120 months	10%

The credit for the defective fryer & pasta vessel shall be applied against the cost of the replacement vessel, utilizing Keating's then current price, upon return of the vessel to Keating, (freight to be paid by Keating within the first 12 months only), only during the first 60 months, subject to the limitations described below.

LIMITATIONS OF LIABILITY

In the event of warranty claim or otherwise, the sole obligation of Keating shall be the repair and / or replacement at the option of Keating of the product or component or part thereof. Such repair or replacement shall be at the expense of Keating except that the Customer shall pay the following expenses: all freight and labor expense for Keating replacement parts; for all other products, mileage exceeding 50 miles or travel more than one hour, labor costs of more than one person, overtime rates, truck charges, difference between ground and other mode of transportation, and holiday charges. Any repair or replacement under this Limited Warranty does not constitute an extension of the original warranty for any period for the product or for any component or part thereof. Parts to be replaced under this Limited Warranty will be repaired at the option of Keating with new or functionally operative parts. Keep Krisps and Computer Timers must be returned to Keating for warranty repair or replacement. Field repairs of those items are not authorized.

THE LIABILITY OF KEATING ON ANY CLAIM OF ANY KIND, INCLUDING CLAIMS BASED ON WARRANTY, EXPRESSED OR IMPLIED, CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER THEORIES SHALL BE SOLELY AND EXCLUSIVELY THE REPAIR OR REPLACEMENT OF THE PRODUCT AS STATED HEREIN, AND SUCH LIABILITY SHALL NOT INCLUDE, AND CUSTOMER SPECIFICALLY RENOUNCES ANY RIGHTS TO RECOVER, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR OTHER INJURIES TO PERSONS OR DAMAGE TO PROPERTY, LOSS OF PROFITS OR ANTICIPATED PROFITS, OR LOSS OF USE OF THE PRODUCT.

If any oral statements have been made regarding the Keating products, such statements do not constitute warranties and are not part of the contract sale. This Limited Warranty constitutes the complete, final and exclusive statement with regard to warranties.

THIS LIMITED WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES WHETHER WRITTEN, ORAL, STATUTORY OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE OR WARRANTY AGAINST LATENT DEFECTS.

EXCLUSIONS

The warranties provided by Keating of Chicago, Inc. do not apply in the following instances:

1. Defects arising out of or resulting from improper installation or maintenance, abuse, misuse, modification or alteration by unauthorized service personnel, or any other condition not attributable to a defect in material or workmanship. Proper installation and maintenance are the responsibility of the installer and Customer, respectively. Proper installation and maintenance procedures are prescribed by the Keating Service Manual.
2. In the event that the product was damaged after leaving the factory due to flood, fire, other acts of God or accident, damage during shipment should be reported to the carrier and is not the responsibility of Keating.
3. In the event the serial number or rating plate has been removed from the product or altered.
4. On parts which would normally be worn or replaced under normal conditions, including but not limited to electric bulbs, fuses, interior and exterior finishes, gaskets and radiants.
5. With regard to adjustments and calibrations such as leveling, tightening of fasteners or plumbing connections, improper gas pressure or improper electrical supply, the checking of and changes in adjustment and calibrations are the responsibility of the installer. Proper installation procedures are prescribed by the Keating Service Manual.
6. In the event of unauthorized repairs or alterations to the Keating product.
7. With the use of sodium chloride in pasta vessels or harsh chemicals in fryer or pasta vessels.
8. Installation in Household.

OTHER TERMS AND CONDITIONS

The Customer must provide proof of purchase from Keating.

This Limited Warranty is valid in the 50 United States, its territories, and Canada, and is void elsewhere.

Keating products are sold for commercial use only. If any Keating product is sold as a component of another product or used as a consumer product, such Keating product is sold As Is without any warranty.

If any provision of this Limited Warranty is held to be unenforceable under the law of any jurisdiction, such provision shall be inapplicable in such jurisdiction, and the remainder of the warranty shall remain unaffected. Further in such event, the maximum exclusion or limitation allowable under applicable law shall be deemed substituted for the unenforceable provision.

This Limited Warranty shall be governed by and construed in accordance with the laws of the State of Illinois.

TO SECURE WARRANTY SERVICE

All repair services under this Limited Warranty must be authorized by Keating or performed at Keating. Authorization may be obtained by calling 1-800-KEATING within the Continental United States, Alaska, Hawaii, Puerto Rico and Canada during normal business hours (8 a.m. through 5 p.m. Central Time, Monday through Friday). When calling, please have the following information available: (1) name, address and telephone number of the Customer; (2) location of product, if different; (3) name, model number and serial number of the product; (4) installation date; and (5) description of defect. Keating will then issue a service authorization work order number to one of its approved independent servicing organizations, or request the product or part be shipped to Keating for repair or replacement, as appropriate. Any defective part subject to a claim under this Limited Warranty must be shipped freight prepaid to Keating for testing and examination. Keating's decision as to the cause and nature of any defect under this Limited Warranty shall be final.

SERVICE INFORMATION

If you have a service related question call 1-800-KEATING.

Please state the nature of the call; it will ensure speaking with the appropriate person.

Have your serial and model number available when ordering parts.

KEATING OF CHICAGO, INC.

8901 W. 50th Street

Mc Cook, IL 60525-6001

Phone: (708) 246-3000 Fax: (708) 246-3100

Toll Free 1-800-KEATING (In U.S. and Canada)

www.keatingofchicago.com

KEATING LIMITED WARRANTY CARD

PLEASE COMPLETE AND MAIL AT ONCE–WARRANTY IS NOT IN EFFECT UNTIL CARD IS RETURNED.
WARRANTY CARD IS ALSO AVAILABLE TO COMPLETE ON LINE AT YOUR CONVENIENCE.

COMPANY: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

DEALER: _____

DATE OF PURCHASE: _____ INVOICE NUMBER: _____

SERIAL NUMBER: _____ ❑ FRYER ❑ FILTER SYSTEM ❑ GRIDDLE

REMARKS: _____ ❑ TOP-SIDE COOKER ❑ HOT PLATE ❑ PASTA PLUS

I HAVE READ THE INSTALLATION AND OPERATION INSTRUCTIONS.

SIGNED: _____ DATE: _____